

AIR CONDITIONING  
UNIVERSITY MICROFILMS  
313 N FIRST ST  
ANN ARBOR MICH

INDUSTRY  
NEWS

78, No. 16, Serial No. 1,431

August 20, 1956

Issued every Monday at  
450 West Fort St., Detroit 26, Michigan  
Established 1926

Member  
Associated  
Business  
Publications

ABP

ABC

Member,  
Audit  
Bureau  
of  
Circulations

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## Inside Dope

By GEORGE  
F. TAUBENECK



Learn to live and laugh —  
thus delay your epitaph

Stories of the Week  
Thoughts for This Week  
Add Newspaper Boners  
Motivation Research Again  
Ingenious Air Conditioning

### Stories of the Week

"Don't like the looks of them clouds," drawled an oldster, who peered upward from his seat in front of an Alabama smalltown post office. "They remind me of clouds we had in Texas before a tornado hit us."

A benchmate inquired if said tornado had been a serious one.

"I'll say it was," came a fervent rejoinder. "That's how I got to Alabama."

It was Sonny's first week at a summer camp.

"Dear Mom," he wrote home, "please send several packages of food. All we get up here is breakfast, lunch, and dinner."

According to *The Spectator*, internal publication of the state penitentiary at Jackson, Mich., an inmate describes said prison as:

"The pen with a lifetime guarantee."

### Thoughts for This Week

What this country needs is a medium-priced power mower that can be operated from an air conditioned room.

"Man old enough to know better desires companionship with lady not quite that old." — classified advertisement.

The function of play is to balance life in relation to work, to afford a refreshing contrast to responsibility and routine, to keep alive that spirit of adventure and that sense of proportion which prevents taking oneself and one's job too seriously, and thus avert the premature death of youth, and not infrequently the premature death of man himself. — AUSTIN FOX RIGGS.

You're middle-aged when the girl you whistle at thinks you must be calling a dog. — D. O. FLYNN.

Music is for the betterment and enrichment of the individual, just as education and reading are. When people come together to play music as they do to play bridge, civilization will have taken its longest stride forward since the beginning of time. Music is something to live with always, and children should be taught to regard it as a close and inalienable friend. — JASCHA HEIFETZ.

(Concluded on Page 18, Col. 1)

## All-Year Operating Cost of 'Comfort Engineered' Test Homes \$11.66 a Mo. RISAC Queries Mfrs. on Backing 'Reasonable' Licensing Codes

### Expenses, Margins, Commercial Outlets Analyzed by NCRSA

TOLEDO — The average house among the first 40 houses participating in Owens-Corning Fiberglas Corp.'s low-cost comfort test program can be heated and air conditioned all year for \$139.89, or an average of \$11.66 a month.

So reports Tyler S. Rogers, technical consultant for Owens-Corning, basing his statement on records calculated thus far on the first 40 houses.

Average cooling cost for the year was \$60.08, while heating cost was \$79.81.

These figures, according to Rogers, reflect a 33% saving to the homeowners because their houses were "comfort engineered" to Owens-Corning specifications rather than to meet F.H.A. minimum property requirements.

Had the homes been built to meet F.H.A. minimum, average operating cost would be \$209.08 per year and could run as high as \$276.29, he said.

"Comfort engineering," Rogers (Concluded on Back Page, Col. 1)

### See Room Unit Sales 1,500,000; Small '56

#### Carry-Over Foreseen

DETROIT — The score on room air conditioners as the industry heads towards the close of the "air conditioning year" (Aug. 31) is this:

1. Sales of more than 1,500,000 units at both the manufacturing and retail level, for the first time.

2. Demonstration that aggressive promotion can move units ahead of the traditional "start of summer" beginning of the selling season.

3. All evidence pointing to a relatively small carry-over inventory of 1956 models. It could (Concluded on Page 4, Col. 5)

## Proper Working Conditions' Require 165 Tons of Extra Cooling at Dem. Convention

CHICAGO — Importance of air conditioning in providing proper conditions for people in vital jobs was emphasized in the installation of over 165 tons of auxiliary air conditioning in the International Amphitheater during the Democratic National Convention to cool the working areas of the press, TV, and radio.

The main arena, of course, had been air conditioned before the 1952 convention. An added feature of the arena system this year was some special cooling for the speaker's podium. Concealed behind the podium, at hip level, are three air conditioning vents that played a flow of mechanically chilled air upward toward the orator.

The second floor upstairs hall, which housed the studios of the major television networks, used four 25-ton units, three 15-ton

units, and 17  $\frac{3}{4}$ -ton window units.

For the larger packaged units, metal ductwork was installed to vent the air through the ceiling of the amphitheater. Water for the water-cooled condensers of these units was supplied from 1,600-ft. wells sunk outside the International Amphitheater.

The 17 window air conditioners, which were used for many of the smaller rooms that housed dark rooms for film processing, offices, etc., were vented to the non-air conditioned second floor of the exhibition hall.

Practically all of the second floor exhibition hall of the International Amphitheater was taken over by the four major television networks, NBC, CBS, ABC, and Mutual. Each of these networks had constructed regular soundproof television stu-

(Concluded on Page 4, Col. 1)

### DuPont OK's Common Refrigerant Number System for Industry

WILMINGTON, Del. — The Du Pont Co. has offered to make generally available a simplified numbering system developed over the last quarter century to identify chemical compounds used as refrigerants.

Acceptance of the proposal, made initially to The American Society of Refrigerating Engineers, would eliminate confusion existing in the refrigeration industry due to similarity of fluorinated halo-hydrocarbon refrigerants.

Highlights of the current report include the following:

Cost of goods sold averaged 79.76%, up slightly from the 79.22% in 1954. Gross margin on all sales was 29.78%, compared with 31.42% in 1954.

Total sales expense averaged 7.65% in 1955, compared with 7.58% the previous year. Delivery, installation, and service

(Concluded on Page 29, Col. 5)

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### Emerson, Philco Plan

#### 10% Price Boosts

NEW YORK CITY — Price boosts up to 10% are planned by Emerson Radio & Phonograph Corp. on its air conditioners and by Philco Corp. on its major appliances, the manufacturers disclosed last week.

Benjamin Abrams, president of Emerson Radio & Phonograph, announced that prices of the company's air conditioning (Concluded on Back Page, Col. 5)

### Dealer Protection

#### Bills Seen In '57

CHICAGO — Legislation to provide more franchise protection to all types of dealers will be introduced during the next Congress, according to Rep. Emanuel Celler, New York Democrat.

Celler, here for the Democratic convention, is chairman of the House judiciary committee.

WASHINGTON, D. C. — A modification of the basic policy of opposition to any licensing provisions in air conditioning and refrigeration regulatory codes and ordinances, is indicated in some recent actions of the Refrigeration Industry Safety Advisory Committee (RISAC).

RISAC members, at a meeting in Washington, tentatively adopted a resolution, for consideration by sponsoring organizations and their company members, recommending that the basic policy of RISAC be reviewed "with respect to licensing laws and ordinances, with the objective of adopting a program that will attempt to have such laws and ordinances, when adopted, consist of reasonable and acceptable provisions."

The resolution was passed, it was stated, as a means of questioning the present policy of opposing licensing and to bring to the attention of RISAC sponsoring organizations that, in areas where licensing, in one form or another, appears to be practically inevitable, some consideration should be given to directing efforts to getting reasonable regulations compatible with the thinking of manufacturers' local representatives.

Committee members also recommended that a questionnaire be sent out to member companies of the organizations that sponsor RISAC (ARI, NEMA, and CGA) to be used in determining the current attitude of their local representatives in code and legislative matters.

A report by RISAC Executive Secretary Henry G. Strong pointed up some of the current code and regulatory activities in various parts of the country:

In Chicago city authorities reportedly have agreed to postpone enactment of proposed special regulations requiring (Concluded on Page 29, Col. 3)

## RACCA To Gather In Miami Beach Nov. 26

CLEVELAND — The 1956 convention of the Refrigeration and Air Conditioning Contractors Association will be held in the Balmoral hotel, Miami Beach, Fla., on Nov. 26-28, the RACCA directors decided recently.

Armand Cowan, president of ACRA of Miami and a national director of RACCA was appointed convention chairman.

The 1957 convention will be held in Chicago in conjunction with the Air Conditioning and Refrigeration Exposition sponsored by the Air-Conditioning and Refrigeration Institute, the directors also decided.

The Air Conditioning and Refrigeration Association of Florida, host association of the annual RACCA Convention, re- (Concluded on Page 29, Col. 5)

## 707 Displays To Fill 'Bright Job Prospects' Seen In Refrigeration, N.Y. Coliseum Nov. 12-16 Air Conditioning; College Trains Servicemen At Hotel Exposition

NEW YORK CITY—The 1956 National Hotel Exposition is a complete sellout, it was announced recently by Ralph H. Freeman, show chairman.

He said 707 display booths will completely fill the first three floors of the new Coliseum here Nov. 12-16.

Exposition exhibitors represent leading manufacturing and purveying organizations from the hundreds of industries that produce and supply food service equipment, furniture, furnishings, foods, and the many other products used by the mass housing and feeding industry.

Advance information supplied by exhibitors indicates that a large number of new products will be premiered.

GREENSBORO, N. C.—S. C. aims at instructing the student in inspecting equipment, cleaning condensers, adding and removing refrigerants, installation, repair, and maintenance of small and large refrigeration and air conditioning systems.

Dean Smith said the demand for trained personnel in these fields is increasing year by year. "We are amazed at the requests for such people which have come to us this spring," he asserted.

"With this refrigeration boom," he continued, "industry cannot now train servicemen in sufficient numbers to pace the demand. This is the reason the college added the refrigeration and air conditioning as a course last year.

"The training program, as presently set up at the college,

"The training requires just two years. The first year is devoted to classroom instruction and practical work to acquaint the trainee with the use of tools and materials used in the field.

"The second year lays almost all emphasis on the practical aspect so that the student, upon graduation, is ready to take his place in industry.

"The program is arranged for persons now engaged in the field who wish a more thorough technical background; those who would like to enter the field."

## Los Angeles Rules Contractor Can Do Electrical Work on Refrigeration Motor

LOS ANGELES—The Los Angeles City Board of Building and Safety has issued a ruling allowing a refrigeration contractor to get an electrical permit to do the electrical work in changing a motor on the refrigeration cycle, Henry B. Ely, executive secretary of the Refrigeration & Air Conditioning Contractors Association of Southern California, Inc., advised members recently.

The ruling followed a protest by the association to A. B. Wicks of the city refrigeration department after a licensed refrigeration contractor had been refused such a permit because he was not licensed as an electrician.

The association contended

that by virtue of his C-38 refrigeration contractor's license, the contractor had a right to change a motor in connection with the refrigeration cycle.

Ely said, "We pointed out that the right of the refrigeration contractor to a permit for this work has nothing whatsoever to do with what craft the contractor uses to perform the work.

"The prime responsibility for the installation remains with the contractor at all times and not with the journeyman."

Along with the new ruling, Ely noted, contractors are warned that if they fail to do a good and workmanlike job, they will subject themselves to disciplinary action by the Contractor's State License Board.

The contractor may do the work with his own employees or sublet it, he added.

## Miami Beach Conclave Jan. 6-10 To End Big Frozen Food Meetings

WHITE SULPHUR SPRINGS, W. Va.—After the National Frozen Food Convention in Miami Beach, Fla. next Jan. 6-10, there will be no more of that magnitude, the convention committees of the sponsoring organizations have decided.

The decision was taken at a joint meeting of the committees representing the National Association of Frozen Food Packers and the National Frozen Food Distributors Association.

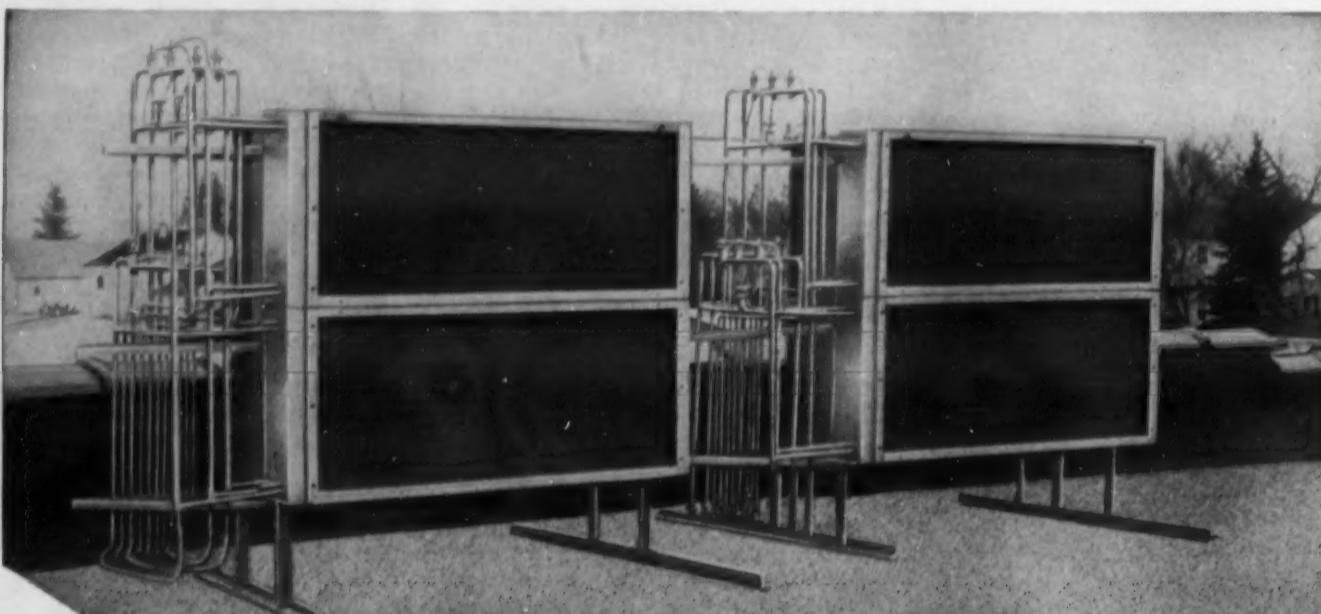
They have found that because of the growth of the industry, securing adequate convention facilities in any city without spreading over too wide a hotel area is difficult.

So, according to E. J. Watson and W. M. Walsh, chairmen of the convention committees, it was decided in the future to hold a sales convention in the fall and a production convention in the late winter of each year.

NFFDA has been assigned direction of the sales convention and NAFFP direction of the production convention.

### McAnally Promoted

TOLEDO—Don McAnally, sales promotion manager for L.O.F. Glass Fibers Co., has been promoted to manager of distributor sales for the company, F. W. Segerstrom, general sales manager, General Products Div., announces.



**KRAMER**

## UNICON FOR SUPERMARKETS

**Serves 14 Compressors  
Winter and Summer  
WITHOUT ANY WATER\***

Photographs of  
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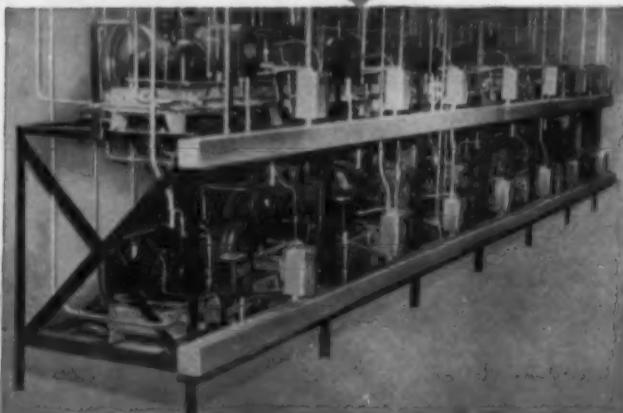
Installed by  
Real Refrigeration  
Sales and Service,  
Milwaukee, Wisconsin

Units furnished by  
Wisconsin Refrigeration  
Supply Company,  
Milwaukee, Wisconsin

WRITE FOR BULLETIN U-291

\*UNICON is a Remote-Type Air-Cooled Condenser

**KRAMER TRENTON CO. • Trenton 5, N.J.**



## SUPER-FLO FILTER-DRIER

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**MOLDED REMCAL DRYING  
FIBERGLAS DEPTH FILTERING**  
Check Super-Flo's amazing low price, for  
both original equipment and replacement,  
against ordinary driers which do not have  
Super-Flo molded drying elements, massive  
fiberglass depth filters and spun-end  
copper shells. Available to the trade  
through wholesalers everywhere.

**REMCO INCORPORATED  
ZELIENOPLE, PA.**

## Utility Appliances To Have New Plant At New Albany, Miss.

LOS ANGELES—Utility Appliance Corp., local manufacturer of air conditioning equipment, forced air furnaces, evaporative coolers, hot water heaters, and automatic gas ranges, announced plans for erection of a new plant in New Albany, Miss.

The 150,000-sq. ft. factory will produce gas and electric water heaters and heating equipment, according to Ben B. Breslow, president.

Formerly a regional producer, the company is also expanding its production, it was added. It is extending its distribution to the Atlantic Coast and Canada.

The firm recently declared a 6% stock dividend on common shares, payable Aug. 30 to holders of record July 30.

## Start Made on Cooling Washington U. Classes

ST. LOUIS—Union members will be among the first Washington university students to enjoy an air conditioned classroom when they meet to discuss current labor problems, it was reported here recently.

The air conditioned room was designed to handle courses such as this, an intensive week-long institute, running all day.

Air conditioned a year ago, the room "has already paid for itself, especially in terms of students' morale and learning," stated Dean Ernest Brandenburg of the university.

One other Washington university classroom has been air conditioned, it was pointed out. Equipment was put in by the Emerson Electric Co. for use by its students attending classes there eight hours a day.

Many university offices, especially those used all summer, were air conditioned recently.

## Turkey Freezing Plant Adding Equipment

DE QUEEN, Ark.—Construction was started here recently on a \$65,000 addition to the Maplecrest Farms, Inc., poultry processing plant, to provide for the freezing and storing of four carloads of turkeys.

Officials said the expansion project will include the building of a 40 by 60-ft. steel and concrete block structure and the installation of insulation, compressors, and refrigeration units.

According to the management, Maplecrest expects to process approximately 200,000 turkeys this fall at the De Queen plant.

Work on the expansion project is expected to be completed by Sept. 1.

## AAF Names Osborne

LOUISVILLE, Ky. — J. M. Osborne has been named southern regional supervisor of unit ventilator and heating ventilating products for American Air Filter Co., Inc.

He will be located in AAF's southern regional office, St. Petersburg, Fla. The announcement was made by John Hellstrom, vice president and director of sales.

In his new position, Osborne will be under the supervision of Morris G. Munson, southern regional manager of AAF.

## Minneapolis Plumbing Supply Firm Sets Up Air Conditioning Division

MINNEAPOLIS—The Standard Plumbing Supply Co. here has set aside a new division in the company which will handle only heating and air conditioning equipment.

The new division is called the Heating & Air Conditioning Supply Co. and is located at 245 Ninth Ave., N.

Purpose of the new divisional setup, according to Sales Manager Bill Haugen, is to give air conditioning and heating dealers

a service separate from plumbing supply dealers. In this way the organization intends to give top quality service to both.

Heating & Air Conditioning Supply is an exclusive Armstrong Furnace Co. wholesaler in Minnesota and part of Wisconsin in the heating and air conditioning line.

At the present there are 27 persons employed in the office, warehouse, and in the sales department.

## N. Carolina Examining Board Official Named

RALEIGH, N. C.—James A. Dean has recently been named executive secretary of the North Carolina Board of Refrigeration Examiners, Karl P. Hanson, board chairman recently announced.

The board was created last January by Governor Luther Hodges. In addition to Hanson, it includes C. V. Stevens, secretary; W. H. Jones, treasurer; and E. T. Chanlett, P. B. Mayo, and G. A. Brickle, it was explained.

## Kansas Dealers Set Plan On Servicemen Training

WICHITA, Kan.—A resolution creating a Service Men's Div. and providing a method of establishing training schools in various towns in the state was adopted by the board of the Kansas Appliance Dealers Association following the group's annual meeting here.

The training school setup will make it possible for factory representatives to instruct a number of groups on one trip, rather than instructing one group at a time, it was noted.

## 165 tons of Extra Cooling Installed at Dem. Convention--

(Concluded from Page 1, Col. 2) two  $7\frac{1}{2}$ -ton units were installed in the Railroad Lounge and one 5-ton unit was installed in the Air Transport Lounge. These lounges were sponsored by the railroads and airlines for the exclusive use of the working press.

All of this space was air conditioned. As an example of the size of these temporary quarters, NBC used over 55,000 sq. ft. of space and spent over \$1,000,000 equipping it.

In addition to these installations of the television networks,

two  $7\frac{1}{2}$ -ton units were installed in the Railroad Lounge and one 5-ton unit was installed in the Air Transport Lounge. These lounges were sponsored by the railroads and airlines for the exclusive use of the working press.

Besides these auxiliary air conditioning installations, RCA had parked in the south exhibition hall seven luxurious house trailers for the use of the press. Naturally, all were air conditioned by RCA Whirlpool win-

dow units. Dave Garroway's "Today" personnel also had an air conditioned trailer at their disposal and such companies as Coca Cola, etc. had other air conditioned trailers parked in this area for use of TV personnel.

This auxiliary equipment is all in addition to the 1,000 ton system which air conditions the Arena of the International Amphitheatre. This huge specially built system, one of the largest in the world, consists of one

600-ton system and one 400-ton part of the Amphitheatre that has permanent air conditioning, the exhibition halls (including a new 112,000 sq. ft. addition which will be completed in December) all have been built with a heating system which can be easily converted to air conditioning during the summer.

The air in the Arena is changed 72 times daily and water for the systems averages 60° F. and comes from two 1,600 ft. wells sunk outside the Amphitheatre.

To assist the system cool the large Arena section of the Amphitheatre during the sessions, the water from the condensers is sprayed continuously over the Arena roof to help dissipate outside heat. It is estimated that the cost of this air conditioning system surpassed \$350,000.

While the Arena is the only

An average of 19 Ranco installations every minute—ten million a year—offers ample evidence of the overwhelming preference for Ranco Controls among refrigeration, air conditioning and appliance servicemen.

The excellent performance of quality Ranco Controls in use is legend among servicemen who prize their reputations for fine service.

The Ranco line of replacement controls is more complete than that of other manufacturers and assures that your Ranco Wholesaler can supply you with the right control for most service jobs.

And Ranco's prompt factory service makes special applications almost routine. Your Ranco Wholesaler will be happy to order "specials" direct from the factory.

Small wonder Ranco has such an impressive record of popularity. Wouldn't it be wise to simplify your service work with quality Ranco Controls, too? Next service job, visit your Ranco Wholesaler.

## 19 NEW RANCO CONTROLS

Installed every minute



WORLD'S LARGEST MANUFACTURER OF REFRIGERATION CONTROLS

### Which control to use?

Ranco Replacement Reference (No. 1544) shows you . . . lists nearly 5,000 different applications. Buy yours from your Ranco Wholesaler. (Not available from the factory.)



*Ranco Inc.*

COLUMBUS 1, OHIO

Ranco High-Pressure Cut-In  
Controls—010-1807, 010-1894

- Applicable to air conditioning systems, water tower condensing units, gas engine driven compressors.
- Operates with  $\text{SO}_2$ ,  $\text{CH}_2\text{Cl}$ , F-12, F-22 refrigerants.
- 100 to 250 lbs. or to 350 lbs. cut-in range.
- 30 to 100 lbs. adjustable differential.
- 0 lbs. lowest cut-out.



J. W. Riley

Associated with the Deering company since February in a sales advisory capacity, Riley negotiated the recent \$1,339,000 contract with the developers of Arrowhead Village, Kansas City, claimed to be the largest single residential air conditioning contract ever closed.

Riley's sales, appliance, and refrigeration background includes many years in appliance distributing, as merchandising manager of United Wallpaper, Inc., and as vice president of J. H. Rasmussen & Co., both in Chicago.

He served for five years as national sales manager in charge of ranges, freezers, and hot water heaters for the Avco Mfg. Co., Cincinnati. Most recently he was president of Victor National, Inc., manufacturer of commercial freezer equipment.

Under the new president's supervision, the company is expected to fill a backlog of orders amounting to \$1.5 million on the Deering "Tri-Pak," which combines the four functions of furnace, air conditioner, hot water heater, and humidifier.

"My first job will be to set up a Special Project Div. to spearhead a drive to interest builders in the Tri-Pak," Riley stated. "We are planning to expand national coverage through distributor-dealers with an intensive sales and project campaign."

### Room Unit Score--

(Concluded from Page 1, Col. 2) be well under the 300,000 units carried over last year, which the industry demonstrated it could handle.

4. Demonstration that an early summer heat wave, especially in the northern metropolitan markets, is still important in giving a big push to the retail sales. Also, lack of hot spells in July definitely holds down late season sales activity.

5. Unusually long spells of hot weather in the south and southwest, and lack of same in the north and northeast, led to a movement of remaining stocks from north to south—a reversal of last year's trend.

### Clarence T. Burg Dies

CLEVELAND—Clarence T. Burg, vice president in charge of sales for Iron Fireman Mfg. Co. here, died Aug. 1 in a local hospital.

Burg had been in charge of sales for Iron Fireman since 1923 and had been a vice president since 1946.

## Ice Melting Time Guessing Contest New Home Conditioner Promotion

BEAUTY QUEEN perches atop 300-lb. cake of ice to dramatize Rheem Mfg. Co. and Texas distributor's contest to guess how rapidly ice stacks would melt in Dallas and Fort Worth. Most nearly correct guess wins prize of a home air conditioner.



DALLAS — Where does ice melt the fastest—in Dallas or Fort Worth?

That moot question took on added significance recently to residents of those rival cities when Rheem Mfg. Co. piled up a stack of 267 blocks of ice, weighing 300 lbs. each, in both towns.

Residents were given two days to ponder the question and then submit their best guess as to which stack would melt first and when the stacks in both cities would be melted.

The contestant having the least total amount of error would win a "Rheemaire" air conditioning system—excluding installation.

### Mfr., Distributor Back Contest

Backing the contest, along with the manufacturer, were the A. Y. McDonald Co., Rheem distributor in the area, and Rheemaire dealers in both cities.

Cooperating were the 125 7-Eleven stores in the Dallas-Fort Worth area. Entry blanks for the contest were available at all 7-Eleven stores.

The stacks of ice, measuring approximately 28 ft. long, 12 ft. wide, and 8 ft. high, weighed 40 tons. This, Rheem claimed, is equivalent to cooling an average house of 1,600 sq. ft. for 30 days in 100° F. weather.

This calculation assumes an outside dry-bulb temperature of 100° F. at peak load, a cooling load on the house at peak conditions of 3,600 B.t.u.h., a compressor running time of 10½ hours per day, and inside conditions of 80° F. d.b. and 67° F. w.b. Outside wet-bulb temperature is assumed to be 75° F.

### Monthly Cooling Cost Using Ice About \$300

If ice could be used to do the cooling job, Rheem said, the monthly cost would be about \$300. With a 3-ton Rheemaire, the company claimed, operating costs would be only about \$17.05 per month.

Official melting time of the ice stack in each city was determined by a local detective agency.

In connection with the contest, all Rheemaire dealers offered a \$100 certificate which could be applied to the purchase price of a Rheemaire system if bought before Aug. 31.

## Westinghouse Div. Names Ga. Outlet

STAUNTON, Va.—The Air Conditioning Div. of Westinghouse Electric Corp. announces the appointment of Air Rite Products Co. of Macon, Ga. as distributor for its entire packaged product line including heat pumps.

The announcement was made by John A. Gilbreath, manager of the Westinghouse Packaged Products Dept.

Headed by Aaron Torch, president; Isadore Torch, vice president; and Harry T. Torch, secretary and sales manager, the company has been a distributor of air conditioning, heating, and ventilating systems for approximately 20 years.

The company will serve parts of Georgia and Florida, it was reported.

## 'Stowaway' Conditioner Installations Shown In Lennox Dealer Manual

MARSHALLTOWN, Iowa—Lennox dealers throughout the country—"5,600 strong"—recently received a highly-illustrated manual describing installation of the Lennox "Stowaway" air conditioner.

The company said the manual makes interesting reading due to the fact that a large portion of its 24 pages are devoted to the many different types of installations to which this new unit lends itself.

Application information in the manual "quickly dispels any doubt" as to the flexibility of the Stowaway for central cooling of most any home regardless of design or existing heating system, it was stated.

"Containing a wealth of prac-

tical ideas on the architectural treatment of attic, cupola rooftop, and yard installation of the Stowaway, the manual is especially helpful to dealers who are working with builders and architects to 'design' the units into the homes," Lennox said.

"The manual, of course, also shows how to connect the Stowaway to warm-air distribution systems in attics, crawl spaces, basements, furred ceilings, and slab floors. It also explains the use of a number of new accessories that speed and simplify installation of the new unit."

### Air Conditioned 5 & 10

COLUMBIA, S. C.—The F. W. Woolworth Co. has formally reopened its enlarged and air conditioned store at 1450 Main St. Manager G. O. Tallent said approximately 33% more floor space has been added to the Columbia store, making it one of the biggest in the Woolworth organization.

**READING "LEKTROSEAL" COPPER REFRIGERATION TUBE**

**FIRST STEP in a Quality Installation—**

Soft temper for easier forming . . . dehydrated — with crimped ends to seal out all moisture and dirt . . . and keep the inside surface absolutely clean. Comes in handy 50-foot coil packed in its own convenient protective carton, clearly labeled for easy identification. To be sure of the job — be sure to specify Reading.

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EMPIRE STATE BUILDING, NEW YORK 1, N. Y. WORKS: Reading, Pa.

**Distribution Depots:**

- READING, PA.
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- CHICAGO, ILL.  
724 W. 50th St.
- DALLAS, TEXAS  
9000 Sovereign Row  
Brook Hollow  
Industrial District
- LOS ANGELES, CALIF.  
120 No. Santa Fe Ave.
- HOUSTON, TEXAS  
1121 Rothwell St.
- OAKLAND, CALIF.  
410 Hegenberger Road  
Brook Hollow  
Industrial District
- CLEVELAND, OHIO  
4615 Perkins Ave.
- ATLANTA, GA.  
690 Murphy Ave.  
S.W., Unit 5, Bldg. B
- DENVER, COLO.  
2845 Walnut St.

## High Pressure Perimeter Systems To Condition 5 Multi-Story Bldgs.

HARRISON, N. J. — Five multi-story buildings now under construction in the metropolitan New York area will be air conditioned by what is claimed to be a new, quieter and simpler Worthington perimeter system.

The five buildings in which Worthington high pressure induction systems are being installed are the 32-story New York Stock Exchange addition; the 26-story Bank of New York building; the Mutual Benefit Life Insurance Co., home office, 18 stories, Newark, N. J.; the 12-story new Supreme Court building, Civic Center Area, Brooklyn; and the Hospital Service Plan of New Jersey building, six stories, Newark.

The Stock Exchange addition will get 1,018 induction circulators, which are the room air conditioning units used for cooling and heating the building, the Bank of New York, 912; Supreme Court, 449; Mutual Benefit Life Insurance, 384; Hospital Service Plan, 210.

## Long Names Blood Administrative Aide

DETROIT — Howard E. Blood, Jr., manufacturing manager of Detroit Gear plant, Long Mfg. Div., Borg-Warner Corp., recently was appointed administrative assistant to the division president, T. J. Ault, president of Long announced.

Blood will coordinate activities of the industrial relations, purchasing, quality control, research, and product engineering departments, reporting directly to Ault, it was added.

## Installing, Servicing Conditioners Will Highlight RSES Boston Forum, Sept. 21-23

CHICAGO — Placing special emphasis on installation and servicing of air conditioning equipment, the Refrigeration Service Engineers Society will hold a regional educational forum at the Bradford hotel, in Boston, Sept. 21-23.

The Boston Forum is the second in a series of three to be held this year and early 1957. More than 1,000 refrigeration men from New England and

surrounding area are expected to attend the three-day program.

Among the subjects scheduled to be discussed, with the aid of actual equipment, demonstrations, and other visual aids, are "Modern Trends in Residential Air Conditioning Control," "Air Troubles in Air Conditioning Systems," and "Design and Application of Insulation to Air Ducts."

### 6 ADDITIONAL TOPICS TO BE DISCUSSED

Other topics programmed by Paul B. Reed, director of the RSES educational department, are "Refrigerant Distributors in Direct Expansion Multi-Circuit Evaporators," "Drying Refrigerants in 'Freon-12' and 'Freon-22' Systems," "Electric Distribution Problems," "Unusual Applications of Mechanical Cooling," "Condensers—Picking the Best Type for the Job," and "How to Sell Quality."

The forum will also feature a gadget contest and a soldering contest.

### BEST SERVICE GADGETS SHOWN TO BRING PRIZES

Four cash prizes of \$50, \$25, \$15, and \$10 will be awarded for the best service gadgets displayed. A gadget is defined as any special tool or device used by a service engineer in his daily work enabling him to save time or perform a better job.

Mueller Brass Co. will sponsor the contest to select the champion solderer of the New England states. A prize will be awarded the winner.

The New England Association of RSES will sponsor the Saturday evening banquet and entertainment, principal social event of the weekend. Social activities are planned for all ladies attending.

The forums are made possible, RSES notes, through a contribution to the RSES educational fund by the Air-Conditioning and Refrigeration Institute.

### Chilled Water System Cools D. C. Penguins

WASHINGTON, D. C.—Penguins at the National Zoological Park here are beating the heat with cool dips in 35° F. water this summer, thanks to a chilled water system recently installed there.

A "Heat-X 'PC'" package chiller in the basement of the Penguin House chills water which is held in a 400-gal. storage tank and then fed into the penguin pool at 35° F. The chilled water is also used for hosing down the cage floor, a procedure which helps maintain cage temperatures at about 40°.

Refrigeration for basic cooling of the cage itself consists of brine pipes behind a sheet metal back wall. Painted on the sheet metal is scenery typical of the penguins' native polar surroundings.

Standard type refrigerator doors are located at the end of the room and heat loss through the front of the cage is reduced by the use of two panes of glass between which is dead air space.



Exterior of Series 1272 single function control available for either low or high pressure.



Series 1273 dual pressure control. Lockout and manual reset available for either low or high pressure cut-out.

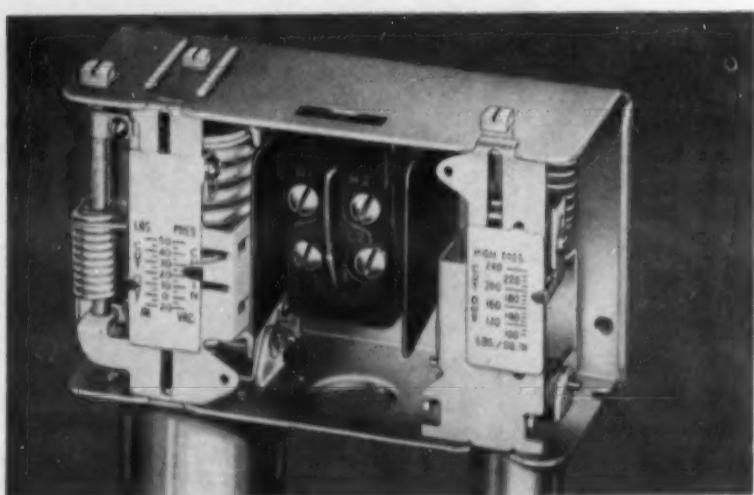
# PENN REFRIGERATION CONTROLS ELIMINATE MOTOR STARTERS

### Extra heavy duty Series 1272 and 1273 pressure controls have the highest rating in the industry!

Specifically designed for commercial refrigeration and air conditioning jobs, the Series 1272 and 1273 are rated at 3 H.P. for single phase compressors and at 5 H.P. for polyphase compressors.

Thus, cost of contactor is eliminated if motor has built-in overload protection. If motor requires external overload protection, the motor starter can be replaced by the more economical "manual starter." So . . . in either case, these Penn controls save you money!

In addition, the Series 1272 single function and Series 1273 dual function controls meet the most modern maximum test requirements. And, there are features such as . . . self-cleaning, snap-acting contacts . . . direct-reading calibrated scale for simple cut-in and cut-out setting . . . and many more. So, don't settle for less. Get the full story from your wholesaler or compressor manufacturer.



Interior of Series 1273 illustrating sturdy contact block with easy-to-reach wiring terminals.

**PENN CONTROLS, INC.** Goshen, Indiana

AUTOMATIC CONTROLS FOR HEATING, REFRIGERATION, AIR CONDITIONING, GAS APPLIANCES, PUMPS, AIR COMPRESSORS, ENGINES

# 'Our Industry Fails To Attract Youth of America'

## Wholesalers Told Lack of Good Men Lawler, ARI Head, Urges More Action In Contributes to Rising Cost Picture 'Inter-Industry Struggle for Manpower'

DENVER—Failure of the air conditioning and refrigeration industry to recruit new and talented personnel, and the turnover in personnel it does have, have contributed to mounting costs in the distribution of the industry's products, Arley L. Baker, regional sales manager of Alco Valve Co., stated in talks given before regional meetings of the Air Conditioning & Refrigeration Wholesalers meeting this summer.

Baker also reported on some discouraging statistics on the industries and fields which are attracting the youth of the present day, as brought forth in the high school senior "career day" interviews conducted by the University of Houston.

### How It Affects Costs

Said Baker in his talk to the parts and supplies wholesalers:

"We have become deeply concerned with the high turnover in wholesaler sales personnel. It is estimated that you have an investment of at least \$6,500 in the hiring, training, and non-productive time of every salesman that you hire.

"This is expensive, and it is also expensive and difficult for the manufacturer to aid in training this new personnel on manufacturer's products as rapidly as the changes occur, for usually no manufacturer's complete line can be covered at one meeting and still bring out the features on all products in the line.

"What is the reason for this turnover in personnel? One description calls it 'men with running fits.'

"It's job-to-job hopping today, and too many young men have 'running fits.' They quit jobs fast, often without notice, for better opportunities or more pay.

### Story from Houston U.

"Many of the universities today are offering full four-year courses in refrigeration and air conditioning. I had occasion recently to talk with Professor Wilson, who is in charge of the Air Conditioning and Refrigeration School at the University of Houston, in Houston, Texas.

"He advised that approximately 250 men were enrolled at present in their air conditioning and refrigeration program, but the majority already have either full or part-time employment in the industry.

"One amazing note for the industry was brought out by Professor Wilson who cited that Houston university holds each year what is termed its annual high school career day. Between two and three thousand high school seniors are brought to the university for a day of inspection and are asked to voice their preference as to what division of the institute they would be interested in seeing while there.

"In 1953 two students asked to see the man in charge of air conditioning and refrigeration; in 1954 one student was seeking this information; in 1955 no student was interested in seek-

ing information in the air conditioning and refrigeration department.

"True, a great percentage of these are general course students, but it certainly shows us that no interest is being created by our industry in the young high school graduates today to seek entrance to the air conditioning and refrigeration field.

"Those students graduating in the air conditioning and refrigeration class this year went into this course only after they had entered the business as apprentices or had become employed in some branch of the Refrigeration Industry."

WASHINGTON, D. C.—Air soon enough," the industry leader said.

Lawler suggests that the industry vigorously woo personnel into air conditioning and away from other industries in the "annual battle for the graduate crop."

"Large segments of the public with the desire for air conditioning, and the dollars to pay for it, do not have air conditioning in their homes. Why? Because we did not have the salesmen to call, or the engineers to lay it out, or the installation men to put it in, or we couldn't get the equipment from the factory

This could be accomplished, he recommends, through an industry-wide program designed to alert young men to the "golden opportunity that exists in our industry for salesmen, engineers, and installation men, and that will exist for years to come.

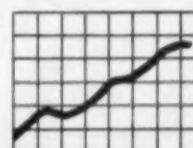
He asked "what are we doing as an industry to stimulate the

interest and imagination of the high school and college graduate today to create a desire to become associated with us as his life's work?"

"I think that the inter-industry struggle for the available manpower supply is more competitive than the struggle for the available 'disposable dollars,'" the industry spokesman said. "The job we're doing isn't one tenth the job we should have done."

### UsAireo Names Outlets

PHILADELPHIA—Appointment of two distributors in Illinois by United States Air Conditioning Corp. is announced by R. P. Kelley, general sales manager of UsAireo. The firms are George V. Andrews, Inc., in Harvard and Howell Heating Service in Dixon.



## When sales go up do you "scramble" for deliveries?



## Brundage stocks can save the day



**STOCKS INCLUDE**  
UNIVERSAL BLOWERS  
DUCT BLOWERS  
BLOWER FILTER UNITS  
EXHAUSTERS  
MOTORS & BLOWER  
ACCESSORIES

Everyone runs into tight scheduling once in a while. The seasonal quality of the heating and air conditioning industry makes an occasional "hurry up" call unavoidable.

When this happens to you, Brundage is a good name to keep in mind.

New warehouse capacity—coupled with a fast order handling procedure—can help you avoid unnecessary shut-downs. And it can help you take advantage of an up-swing in business that you might otherwise be unable to handle.

**MANUFACTURERS:** Brundage Universal Blowers can often solve your production problems because they are a stock item and can meet most applications.

**THE Brundage COMPANY**

508 NORTH PARK ST. KALAMAZOO, MICHIGAN  
TELEPHONE 2-0251

**Experts Say Refrigerated Egg Cooling Rooms Best**

NEW BRUNSWICK, N. J.—Poultry experts J. C. Taylor and H. Warren of Rutgers university here, have recommended the use of refrigerated egg cooling rooms rather than room air conditioners to maintain egg quality.

They say they have found that the room air conditioner does a satisfactory job in temperature control but leaves something to be desired in providing the proper humidity level.

**Firm Opens Operations**

HELENA, Ark.—Twin City Refrigeration Co. recently opened its doors at 107 S. 4th St. in West Helena recently. O. W. Bruce is sales manager and Julian Cashion, service manager. The firm sells the RCA-Whirlpool line and services all refrigeration equipment.

**YOU'LL LOVE IT, TOO!**



**NEW**  
**dacor**  
DISPOSABLE ACTIVATED CARBON ODOUR REMOVER  
**FAST FILTER**

Folks just naturally go for DACOR (Disposable Activated Charcoal Odor Remover.) Homes stay cleaner, brighter, free of smog and smell with a DACOR filter in the year-around air conditioner. For bigger sales—add air purification with DACOR to your air conditioner or forced-air furnace line.

**What DACOR will do:**

- ★ Remove tobacco smoke smell
- ★ Banish smog and odors
- ★ Boost efficiency, cut costs

**What DACOR will not do:**

- ★ Reduce oxygen in the air
- ★ Mask smells with another odor
- ★ Reduce blower efficiency

a product of the

**BARNEBEY-CHENEY COMPANY** Columbus 19, Ohio

BARNEBEY-CHENEY CO. 820  
Columbus 19, Ohio  
Please send "The DACOR Story"  
My Name \_\_\_\_\_  
Address \_\_\_\_\_  
Firm Name \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

**Manufacturers' Shipments of Compressor Bodies  
Produced by Companies Reporting to ARI  
(Except for Household Refrigerators)  
For All Refrigerants Except Ammonia  
(Excluding Units for Automotive Air Conditioning)**

Horsepower	Shipments Including Exports	
	April, 1956	*January-April, 1956
1/5 hp. and under	51,722	188,713
1/4 hp.	96,406	317,683
1/3 hp.	31,973	123,160
1/2 hp.	65,688	170,550
3/4 hp.	85,613	372,796
1 hp.	82,971	301,898
1 1/2 hp.	42,009	138,316
2 hp.	7,934	30,435
3 hp.	13,253	51,350
5 hp.	10,090	35,427
7 1/2 hp.	4,260	15,182
10 hp.	1,462	4,521
15 hp.	810	2,342
20 hp.	295	954
25 hp.	216	569
30 hp. and over	761	2,450
<b>Total</b>	<b>495,472</b>	<b>1,756,346</b>
<b>For Ammonia Refrigerant—Total</b>	<b>162</b>	<b>741</b>
<b>For Automotive Air Cond.—Total</b>	<b>27,755</b>	<b>114,620</b>
<b>Grand Total</b>	<b>523,389</b>	<b>1,871,707</b>

\*Includes revised March data reported to ARI.  
Reporting companies: Airtemp Div., Chrysler Corp.; Brunner Mfg. Co.; Carrier Corp.; Copeland Refrigeration Corp.; Curtis Mfg. Co., Refrigeration Div.; Frick Co., Inc.; Frigidaire Div., General Motors Corp.; General Electric Co.; Kelvinator Div., American Motors Corp.; Lehigh, Inc.; Servel, Inc.; Tecumseh Products Co.; Trane Co., The; Vilter Mfg. Co., The; Westinghouse Electric Corp.; Worthington Corp.; York Corp.

This summary includes all compressor bodies shipped by the reporting companies regardless of whether they were shipped separately or incorporated into a condensing unit or unitary end-use product (such as a room air conditioner, display case, freezer, or commercial refrigerator). Shipments for export are included. Shipments for household refrigerators are not included.

In order to avoid duplication of reporting, shipment figures were requested only from companies that assembled the machined compressor casting with the components necessary to make a complete compressor or motor-compressor assembly.

**Mfrs. Compressor Body Shipments Jump 37% In First 4 Months over '55 Period**

WASHINGTON, D. C.—Manufacturers' shipments of compressor bodies used in air conditioning and refrigeration units were up 37% during the first four months of 1956 as compared with the same period of 1955, it was revealed today by Geo. S. Jones, Jr., managing director of the Air-Conditioning and Refrigeration Institute.

These figures, which do not include compressors used in household refrigerators nor a relatively small number designed for use with ammonia refrigerant, were compiled from reports made to ARI by manufacturers whose output is estimated to represent in excess of 90% of the industry, he said.

Actual shipments for the four-month period totaled 1,870,966 units, compared with 1,365,670 units in the same period last year. April shipments this year were 523,277 units, against 399,785 in April 1955.

Of the four-month total for 1956, 114,620 of the compressor bodies shipped were of the type used in automotive air conditioning. A comparative figure for four months of 1955 is not available, but total 1955 shipments amounted to 255,371.

**REFRIGERATOR-FREEZER COMBINATIONS**

DRY BEVERAGE COOLERS MILK DISPENSERS

**Sell... REFRIG-N-FREEZ**

and you'll sell . . .

**AMERICA'S FINEST**

**2 in 1  
REFRIGERATOR  
FREEZER  
COMBINATION**

- Waist High Large Size Refrigerator above
- Full 350 lb. Freezer Below
- Separate Temperature Controls
- Built-in Storage Compartments in Both Doors
- Refrigerator Liner is Porcelain
- No Defrosting

Write Today for Complete Information and Full-Color Literature



UPRIGHT FREEZERS BEER DISPENSERS

DESIGNED, ENGINEERED AND MANUFACTURED BY  
**United** REFRIGERATOR COMPANY  
HUDSON, WISCONSIN  
WRITE, WIRE OR PHONE TODAY

For more information about products advertised on this page use Information Center, page 22.

**NEW Designs and Features!  
P-H REFRIGERATORS  
and FREEZERS**

Important features of the newly styled and completely redesigned P-H line of commercial refrigerators and freezers include:

- ★ Genuine Porcelain or Stainless Steel Finish.
- ★ Exclusive "Grad-U-Matic" Self-Defrosting Air Conditioning.
- ★ Tubular Electric-Welded Steel Frames.
- ★ Heavy Fiberglass Insulation.
- ★ Solid or Triple Thermopane Doors.
- ★ Self-Contained or Remote Control.



MODEL P 40-2  
Self-Contained



MODEL SA 15-15  
Two-Temperature  
Refrigerator  
APPROVED



MODEL P 66-3  
Self-Contained  
Also AVAILABLE — A complete line of Reach-In, Pass-Thru and Salad Refrigerators . . . Upright Storage Freezers . . . Baker's Freezers and Dough Ringers . . . Dairy-Delicatessen Cases . . . Two-Temperature Refrigerators . . . 22 to 96 Cu. Ft. Capacities . . . Dry Beverage Coolers . . . and Walk-In Coolers and Freezers.

**PUFFER-HUBBARD REFRIGERATOR CO.**  
GRAND HAVEN, MICHIGAN

EXPORT OFFICE — PUFFER-HUBBARD INTERNATIONAL —  
440 Lafayette St., New York City — Cable "MANREFSUP"

**GASKET  
PROBLEM?**



**call JARROW**

Jarrow experienced gasket engineers have worked closely with manufacturers for many years, providing the finest in gaskets for every type of insulation application for refrigerating and air conditioning. If you have a problem that challenges solution, Jarrow development engineers will cooperate with you in producing the very product you need. There is no cost or obligation for this service. Send us your blueprints.

Jarrow Gaskets, to your exact specifications, are available in all these materials or combinations:

**Jarene-B**—the new, tough, flexible vinyl plastic extrusion that can't crack, check, or oxidize—grease resistant—long wearing—easily cleaned!

**Rubber**—in any extruded form—as a rubberized fabric—or sponge rubber, which is ideal as a combination with either plastics, rubber extrusions or fabrics.

Others include Neoprene Fabric and Waterproof Cotton Webbing.



SEND TODAY FOR JARROW CATALOG C-300, containing the latest in gasket developments, designed to save you valuable assembly time and cut your production costs. You'll want to keep this valuable guide handy constantly. Write:

**JARROW PRODUCTS INC.**  
Almost a Third of a Century of Gasket Experience  
420 NORTH LA SALLE STREET • CHICAGO 10, ILL.



Silvercraft  
Summer  
Shower

PATENTED **NEW  
DESIGN  
COOLING TOWERS**

**BETTER  
BREAKUP  
RAISES  
COOLING  
EFFICIENCY**

Here's an all-metal cooling tower that most efficiently removes heat from recirculated water by even, constant dripping through a corrugated and perforated wet deck cartridge which provides considerably greater cooling surface than any other tower on the market today. The specially designed fan blade pulls a powerful draft of air which is distributed evenly throughout the cartridge because of the efficient air inlet screen. By breaking up both the air and the water into the smallest units, the cooling operation attains maximum efficiency and thus lengthens the life of the condenser. Simply installing a new fan blade with greater pitch quickly enlarges the tower's cooling capacity and eliminates the need for an entirely new unit. Every step of the way . . . from inventory and installation to operation and maintenance . . . you get better results from Silvercraft "Summer Shower"!



**Lowers  
Inventory**

The "Summer Shower" cooling tower costs no more than old-fashioned towers, yet you can stock nine sizes, from 2 to 25 tons, with only four units and five extra fan blades!

**Silvercraft**

**Minimizes  
Maintenance**

Inside the beautiful stucco-embossed aluminum body metallic parts of steel and aluminum are protected by either double-coated baked enamel or baked-on thermal plastic coatings. Rust and corrode resistant. The wet deck cartridge is removable and all plumbing parts are easily accessible. The light weight of the tower as a whole makes installation very simple.

Write, wire or phone for name of nearest distributor  
P. O. BOX 107 • LOUISVILLE, KENTUCKY

## Operator's Food Store Floor Layout Plan

### Do-It-Yourself Kit Lets Owner Arrange 'Equipment' as Desired

NILES, Mich. — The Tyler "Floorcaster," a new, copyrighted, do-it-yourself, self-service food store floor layout planner for grocery operators, has been announced by the Tyler Refrigeration Corp.

The Tyler Floorcaster consists of a layout "board" of heavy-weight paper stock with printed graph scaled  $\frac{1}{8}$  in. to the foot, plus a complete set of detachable, die-cut, 2-dimensional replicas of Tyler equipment.

These include self-service wall, island, and double-island refrigerated "Sales-Cases"; "Rolling-Cold" packaging conveyors; walk-in storage freezers and coolers; reach-thru refrigerators; refrigerated display tables; wall and island shelving, etc.

The replicas are backed with a special type adhesive which permits the user to arrange or re-arrange "equipment" in any location, and as frequently as desired.

The Tyler Floorcaster was prepared for food store operators who desire to work out their own initial layout ideas preliminary to discussion with their Tyler agents.

However, the operator may continue to avail himself of the services of the Tyler store planning department, where his preliminary layout will receive thorough analysis of Tyler's store planning specialists. In addition, a comprehensive layout set up with 3-dimensional scale models will be photographed for the store operator's use.

The Tyler Floorcaster is part of the new Tyler Store Plan Kit No. 1 which also includes a complete presentation of the new Tyler-Ketcham Color Compatibility System.

Lithographed in full color with color-keyed examples of store interiors, it enables the store operator to plan his new or remodeled store for color.

### Weber Showcase Ups F. M. Schultz In Sales

LOS ANGELES — Fred M. Schulz, who has held various managerial posts with the Weber Showcase & Fixture Co., Inc. has been appointed director of sales for the National Users Div., according to J. L. Kaufhold, vice president of the Weber firm.

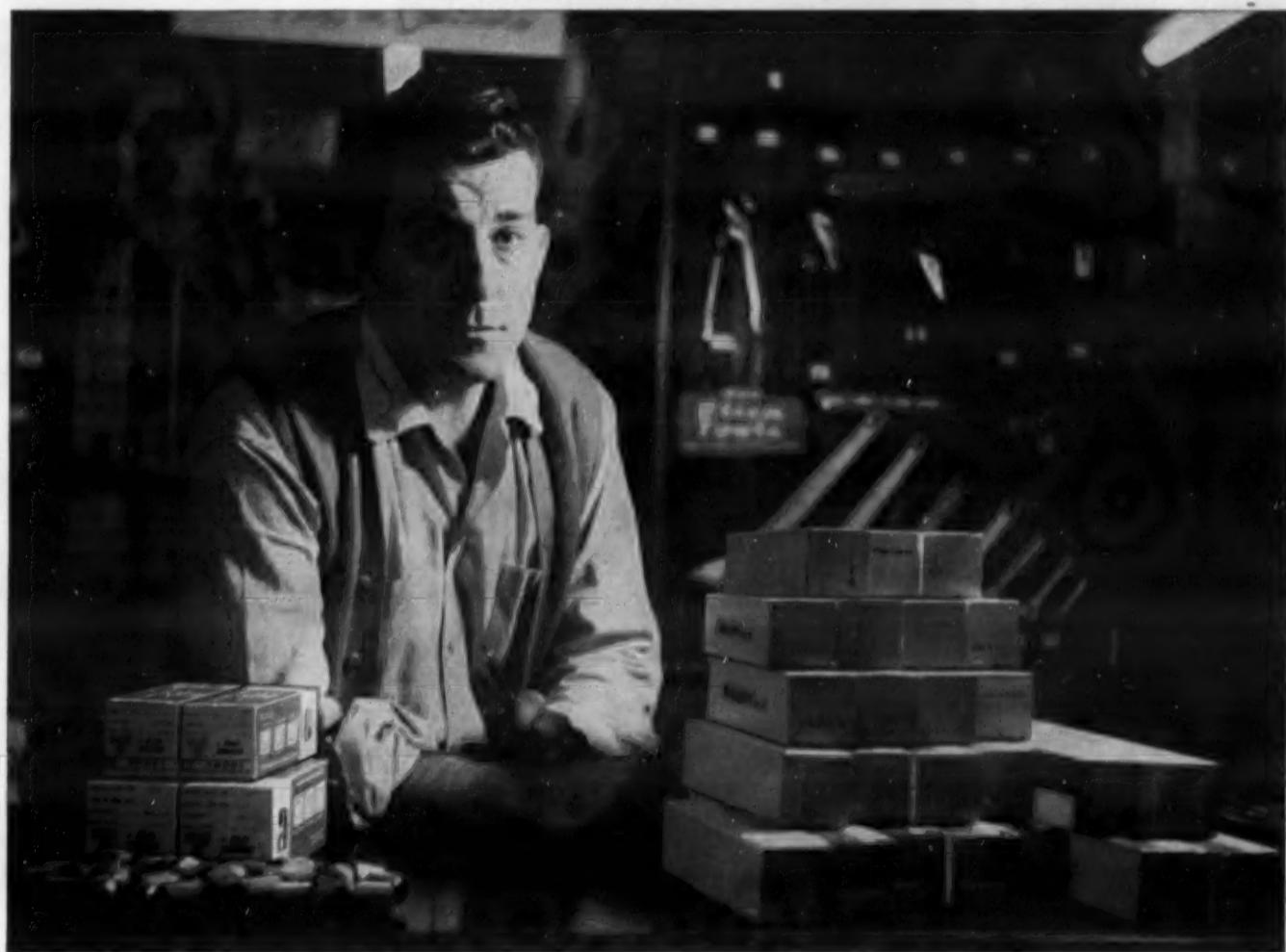


F. M. Schulz

COMING SOON  
"BDTTM,A"  
Ask Your Wholesaler  
or write  
WILSON MFG. CO.  
Memphis, Tennessee



NEW Tyler "Floorcaster," a copyrighted, do-it-yourself, self-service food store planner which enables grocery operators to work out initial layout ideas for new or remodeled stores. Replicas of a complete line of self-service refrigerated equipment and shelving are backed with special type adhesive permitting user to arrange or re-arrange equipment as frequently as desired. Tyler "Floorcaster" furnished as part of the New Tyler Store Plan Kit #1 which also includes complete presentation of the new Tyler-Ketcham color compatibility system for color planning of food store interior. Kit available at \$1 each, postpaid, Tyler Store Planning Dept., Niles, Mich.



Compare the Ansul line on the left with a typical competitive line at the right.

## You can see how the Ansul line will cut your dollar investment in driers up to 75%

You start to save money *immediately* when you standardize on the Ansul line of T-Flo Driers and fittings. Service engineers and contractors who have stocked the Ansul line have been able to cut their dollar investment in drier truck stock an average of 50% to 75%.

Savings like this are possible because Ansul's 4 T-Flo Drier cartridges and 8 T-Connectors are all *interchangeable*. These twelve parts give you 32 possible installation combinations. Why tie up two or three times as much money in 32 ordinary driers? The Ansul line not only provides a complete stock at a fraction of the cost, but assures a better, faster drying job. For the largest installations Ansul T-Flo Driers can be easily manifolded or used on a by-pass to provide unlimited drying capacity. No need to stock large, expensive driers that you seldom use.

Changing a T-Flo Drier cartridge is the easiest thing

### Refrigerator Sales Rise Causes Norco To Move Quarters

LOS ANGELES — A new building at 5656 West Washington Blvd. here is now the headquarters of Norco Sales Corp., according to Norman H. Lee, Norco president.

The building, which contains 5,000 sq. ft. of floor area, will provide space for executive offices, permanent display, service and school facilities, and warehousing.

The move, according to Lee, is a part of Norco's over-all expansion policy to keep pace with its rapidly increasing refrigerator sales.

"As a firm specializing in refrigeration products," Lee said, "we feel that there is a particular need for better service training for dealer personnel. Our

new facilities now permit us to offer this training."

Dealers are invited to contact Norco if they wish their personnel to attend the regular schools on installation and servicing of "Krefft" convertible refrigerators, "Clubmaster Cold-bars," and other Norco products.

Beginning immediately, these schools will be conducted by Floyd Von der Scher, Norco's technical service representative, with special emphasis being given to the convertible, claimed to be "the only refrigerator which runs on either LP-Gas or electricity."

### Manitowoc Names York Regional Mgr.

MANITOWOC, Wis.—Ray G. Fredrickson, general sales manager, Manitowoc Equipment Works, has announced the appointment of Robert N. York as southeastern regional manager for Manitowoc's complete line.

in the world. Breaking leak-proof flared or sweated joints is unnecessary. Just unscrew the old drier and replace it with a new one. Hand tightening will give you a leak-proof seal. And you can install the T-Flo Drier in any position, up, down or sideways.

Ask your wholesaler about the new Dry-Eye fitting, the moisture indicator which means substantial savings in both time and money to service engineers and equipment owners. The window in the dry-eye changes color to let you see if the system is wet or dry. *Blue* means the system is dry, *pink* means excessive moisture is present.

Ansul is a national distributor for DuPont "Freon"—the time tested refrigerant. **ANSUL CHEMICAL COMPANY**, Marinette, Wisconsin.



**ANSUL**

**Olson To Head Sales At Yates-American**

BELOIT, Wis.—C. K. Olson, Jr. has been elected vice president and director of sales of all products manufactured by the Yates-American Machine Co. here, according to J. J. Gallagher, president.

For the past two years Olson has been coordinator of sales for the Head & Knife and Lipman Refrigeration Divs. as well as the J-Line, Power Tool, and Heavy Woodworking Divs.

In addition to his present duties he will now direct the sales program of Heat Transfer Products Div. His added responsibility includes sales direction of a new line of heat exchangers recently introduced by Yates-American.

Prior to joining the Beloit concern in early 1954, Olson was general manager of a plant manufacturing industrial locomotives and director of sales of a diesel engine plant.

**Refrigeration Research Moves to Cooled Offices**

COLORADO SPRINGS, Colo.—The Refrigeration Research Foundation recently moved into an air conditioned, semi-modernistic, one-story, building here at 12 N. Meade Ave.

Main feature of the new headquarters is the first-floor fireproof vault library to house research records. Two offices and the entrance room are here.

Year-round air conditioning equipment, work and storage room, and rest rooms are located in the basement.

**Wolverine Opens Mill Depot To Serve Fla. Tube Clients**

NEW YORK CITY—A new mill depot stocking refrigeration, automotive, and copper water tube has been opened in Miami, Fla. to serve the customers of Wolverine Tube, Div. of Calumet & Hecla, Inc., announced F. F. Moore, assistant eastern district sales manager.

The establishment of this new service facility will speed shipping service to customers in the Florida area.

Tillman Stone will coordinate the new Wolverine mill depot operation from Jacksonville Beach, Fla.

**Condition Church Bldg.**

CHATTANOOGA, Tenn.—The Central Church of Christ has begun construction of a new air conditioned two-story education building at Vine and Lindsay.

**MARSH Instruments**

THE SERVICEMAN LINE of Testing Gauges, Testing Thermometers, Timers, etc.

PRESSURE GAUGES and Dial Thermometers for all services.

MARSH-ELECTRIMATIC, Water Regulating Valves, Solenoid Valves.

MARSH INSTRUMENT COMPANY  
Sales Affiliate of F. Marsh Corporation  
Dept. D, Skokie, Ill.

**Klingler Celebrates 20th Year at Kramer Trenton**

TRENTON, N. J.—Harry Klingler, Philadelphia area sales representative for Kramer Trenton Co. here recently celebrated his 20th year as a salesman for the firm.

Active in the American Society of Refrigerating Engineers, Klingler has served as Philadelphia section chairman of ASRE.

**Dispensing Unit Mfr. Names Stroh In Sales**

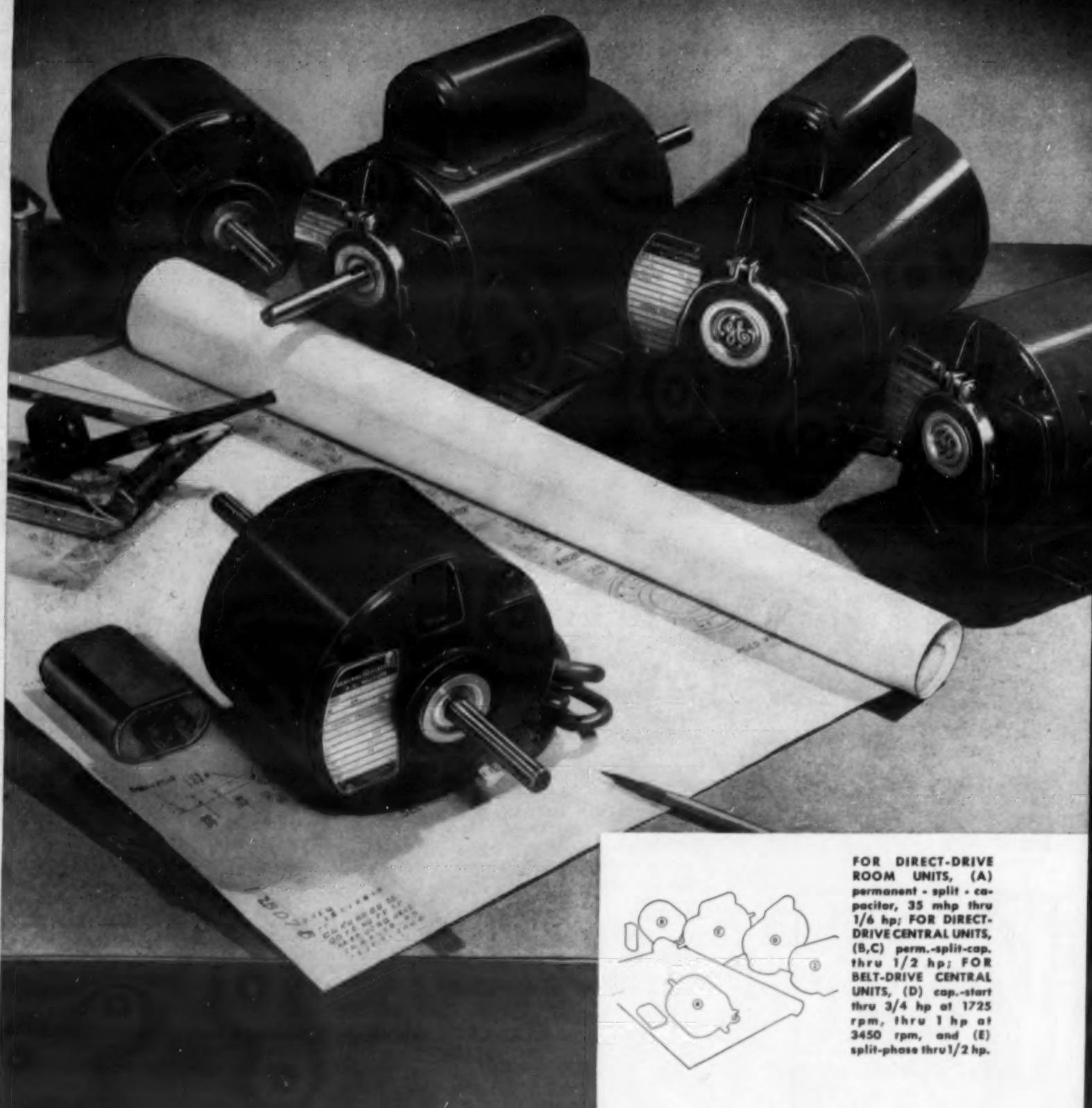
MILWAUKEE—The Perlick Brass Co., manufacturer of dispensing equipment for the brewing and soft drink industry, has announced the appointment of Robert W. Stroh as regional sales manager in Pennsylvania and adjacent metropolitan trading areas of the state of West Virginia, according to a recent report.

**McCall Dealers To Have 'Certificate of Approval' As Part of Reach-In Line Promotion**

HUDSON, N. Y.—A heavily advertised promotion of its line of reach-in and upright freezers to mass feeding establishments will be launched by McCall Refrigerator Corp. across the country beginning Sept. 1.

Theme of the campaign tells top management to see the McCall "Equipment Specialist" in stalling equipment for mass feeding establishments.

During September and October top management will be urged to contact or visit the local dealer. Recognized McCall dealers will have a "Certificate of Approval" attesting to the fact that the dealer has received the required factory training for planning and installing equipment for mass feeding establishments.

**How G-E motors help**

FOR DIRECT-DRIVE ROOM UNITS, (A) permanent-split-capacitor, 35 mph thru 1/6 hp; FOR DIRECT-DRIVE CENTRAL UNITS, (B,C) perm.-split-cap. thru 1/2 hp; FOR BELT-DRIVE CENTRAL UNITS, (D) cap.-start thru 3/4 hp at 1725 rpm, thru 1 hp at 3450 rpm, and (E) split-phase thru 1/2 hp.

## Year-Round Through-the-Wall Units Condition 204 Disneyland Hotel Rooms

ANAHEIM, Calif.—One hundred additional Amana room air conditioners have been delivered and installed "through the wall" in the second wing of the new Disneyland hotel.

As a result, each of the hotel's 204 completed bedrooms—plans call for 650 rooms when the \$10,000,000 project is finished—is equipped with its own built-

in  $\frac{3}{4}$  or 1-hp. Amana "Year 'Round" air conditioner. One hundred and four units were installed in the hotel's first wing. All 204 air conditioners are installed "through-the-wall," in openings designed especially to fit the Amana Year 'Round. This installation through the operation of a single glider control. The necessary switching of damper, compressor, and fans is accomplished automatically once the control is set. In addition to their cooling capacity, the air conditioning units at the Disneyland have a "chill-check" heater for use on cool days or evenings.

stallation costs considerably.

Amana Year 'Round units provide any one of six different combinations of cooling, heating, dehumidification, and ventilation through the operation of a single glider control. The necessary switching of damper, compressor, and fans is accomplished automatically once the control is set. In addition to their cooling capacity, the air conditioning units at the Disney-



ONE of Disneyland hotel's 204 Amana year-round room air conditioners.

## N.Y. Tenants Charged \$2 For Room Units Extending 6 In. Past Window Frame

NEW YORK CITY—Landlords of rent-controlled buildings in Manhattan and the Bronx may now charge \$2 a month extra rent when a tenant installs a room air conditioner that extends six in. or more beyond the window frame, or is attached to the building's exterior, according to a recent ruling by the State of New York Temporary Housing Rent Commission.

Issuing an advisory bulletin concerning use of room air conditioners in metropolitan New York City, the Commission said the landlord is entitled to an extra \$2 a month in Brooklyn, Queens, and Staten Island if the air conditioning unit just extends beyond the exterior of the building.

The discrepancy is due to different court decisions in the two areas, it was explained.

Where the landlord pays for the electricity, he is entitled to an additional fee per month when the tenant installs an air conditioning unit on the following basis:  $\frac{1}{3}$  hp., \$1.45 per month;  $\frac{1}{2}$  hp., \$1.90;  $\frac{3}{4}$  hp., \$2.90; and 1 hp., \$3.75.

All of these additional fees would remain in effect as long as that individual tenant occupies the apartment, the Commission ruled.

## 4 Men Install 310 Built-Ins In 8 Days In D.C. Apartments

WASHINGTON, D. C.—Threatened with exodus of 163 tenants from his 17-year-old Spring Gardens apartments here as more attractive apartments became available, Morris Miller, the owner, decided to do something about it.

He installed 310 Lewyt built-in wall air conditioners in the 163 apartments and now has applications on hand for future available apartments.

Miller believes he saved his multi-story building from obsolescence by installing air conditioning.

Installation of the Lewyt units was not difficult, Miller reports. Four men completed the job in eight days. Cost for breaking through a brick wall and installing the steel casing to house the air conditioner chassis was \$33.80 each.

In addition, Miller views the installations of through-the-wall air conditioners as a self-liquidating investment because rents have been increased according to the number of units placed in each apartment.

A tenant, with one unit, pays \$6 more a month, while two air conditioners bring added revenue of \$11 monthly, and three machines raises the rent \$14.

Each apartment has an average of two installations, bringing a yearly rent increase to Miller of about \$21,000.

## Firm Chartered In La.

BATON ROUGE, La.—Air Distributing Co., Inc., Lake Charles, has been granted a charter to deal in air conditioning and refrigeration equipment.

# simplify your design problems

**G-E motors tailored to your air conditioner and produced on schedule help you develop and market new products faster!**

General Electric "Form G" fractional horsepower motors can help you improve the design of your new air conditioning units and get them into production faster because:

**1. THE RIGHT MOTOR** is available from General Electric *now!* The motors at left are typical of the complete line of General Electric motors designed specifically for the high power factor and efficiency you want. If you require modifications to solve a specific design problem . . .

**2. GENERAL ELECTRIC APPLICATION ENGINEERS** are ready to help you get the best motor for your product, commensurate with performance and cost requirements. And . . .

**3. ON-SCHEDULE DELIVERY** of General Electric motors helps get your new product into production without delay. As for quality . . .

**4. "YEARS-AHEAD" G-E DESIGN** has been proved by the outstanding record of over 5,000,000 motors put in

\*Reg. trade-mark, General Electric Company.

use since G-E pioneered in the design of smaller, lighter motors four years ago. You get more dependable motor service and greater customer satisfaction from such G-E features as: a bearing system that needs no re-oiling for summer cooling use; an insulation system of Formex\* wire, Glyptal\* alkyd-resin, and Mylar† polyester film that is virtually unaffected by moisture and humidity.

You can simplify assembly, too, with such features as the "quick-connect" terminal board and "clip-on" terminals which speed hookup.

These are only a few of the many G-E motor benefits that will help keep your new design program on schedule, and improve your product as well. If you'd like to get help on a specific problem, contact your nearby G-E Apparatus Sales Office. For more information on "years-ahead" G-E motors, write for Bulletin GEA-5567. General Electric Co., Sect. 702-31, Schenectady, N. Y.

†Reg. trade-mark, DuPont Company.



APPLICATION HELP from G-E engineers familiar with your problems assures you of the best motor to meet your requirements.



ON-SCHEDULE DELIVERY of the motors you need is the result of General Electric's flexible, multi-plant facilities.

# GENERAL ELECTRIC

G.E. ALSO OFFERS A COMPLETE LINE OF SHADED-POLE MOTORS



1/12 TO 1/4 HP  
4- and 6-pole



25 MHP TO 1/12 HP  
open and enclosed



15 TO 35 MHP  
2- and 4-pole



1.5 TO 16 WATTS  
4- and 6-pole

## Inside Dope

By GEORGE F. TAUBENECK

(Concluded from Page 1, Col. 1)

In the house of the future a housewife's most important appliances will not be for food preparation, but for food storage. Cooking, as we now know it, will be considered strictly a hobby. — JAY DOBLIN, director, Illinois Institute of Technology.

### Add Newspaper Boners

Mr. Cook is survived by a wife, Dorothy, and a daughter, Susan Bart Manufacturing Co. — Detroit Free Press.

### Motivation Research Again

"Nobody listens to anybody," declares Roy Garn, advertising director of the Emotional Appeal Institute.

"Nine out of 10 words we

speak are unheard. We're all preoccupied with something else. The thing we have to do, to get anyone to pay attention to us, is to break up normal preoccupation."

So Garn has devised a deal which he insists that nobody can resist. He calls it:

"The Four Fatal Emotions," and has trade-marked the title. Herewith his quartet of emotional questions:

Do your feet hurt?

Could you use \$25?

How about a little kiss?

Watch out for the mustard.

If we are to believe Garn, every reader of those headlines excitedly will read every word of the following stories. Those four short sentences are the essence of his idea.

As "Mr. Emotional Appeal" explains it, we're all preoccupied with our own PERSONAL problems. And that's where those

problems. And that's where those

people come in to help us. Garn believes the only way to get through to a listener—the only way to break up selfish preoccupation—is to appeal to basic emotions. And he's boiled them down to these four:

Self-Preservation is the first appeal. So he asks: "Do your feet hurt?" or challenges: "You're not looking well."

Everyone, he contends, desires a happy, painless life. So, a good way to break through to a non-listener is to appeal to his instinct of self-preservation.

Money also is an emotional appeal. Anything which touches our wallet sense will get attention right away. "Could you use \$25?" or "How about that two bucks you borrowed from me in 1946?" are prime examples of questions which would get attention immediately.

Romance, of course, gets attention anywhere, anytime.

"How about a little kiss?" or "Whatcha doin' for dinner tonight, babe?" or "Gee, look at that handsome brute over there"—all evoke lurking romantic reactions.

Everybody wants to feel he is somebody. We need recognition. We want to look good, be treated well, and be recognized as wonderful individuals.

In actual practice, Garn applies his theories with workmanlike knowledge. Once, passing near the Brooklyn Bridge, he noticed a huge crowd gathered. Bystanders were watching as police tried to talk a woman out of jumping into the East River, from her perch halfway up one of the cables.

"People kept shouting, 'Don't jump, don't jump!'"

But, Garn declares, "That's no way to break preoccupation. I could see that self-preservation wasn't the emotional appeal that would be of any use.

"The woman was well dressed, so money wasn't her problem. And she was middle aged, so the chances were it wasn't romance. That left recognition. As I've said, she was well dressed, so that made my diagnosis sure."

"So I yelled up, 'Okay, lady, jump if you want to, but you're going to jump into some pretty dirty water.' She came right down. The idea of dirty water got through to her, and she couldn't stand the thought."

### Ingenious Air Conditioning

A unique air conditioning system which raises the temperature of cold air in the winter by making ice—and uses that ice to reduce the temperature in the summer—has been put into service at the Stobie section of the International Nickel Co.'s Frood-Stobie Mine in the Sudbury district of Ontario.

Instead of stoking the furnace or turning on the oil burner when the thermometer dives below zero during northern Ontario's frigid winter, ice production is stepped up to take the chill off the fresh air supplied from the surface to the mine workings.

Basis of this unusual constant-temperature system is a convenient twist of nature (utilizing a principle whereby heat is released when ice is formed).

The fan that delivers tempered air into this underground mine has a diameter of 198 in.—which makes it one of the largest in the world.

This powerful fan, which has a top capacity of 750,000 c.f.m., blows fresh air from the surface through a 300-ft. vertical airway (20 ft. in diameter) into two huge open stopes mined, by the blasthole method, between its 300 and 500-ft. elevations.

Each stope is 80 ft. wide, 200 ft. long, and 200 ft. high. Said stopes are separated by a pillar 70 ft. wide. Tempered air circulates through the two stopes in succession on its way to the main intake.

Water from the mine's main pumping system is furnished at 120 lbs. pressure to the four spray points at the top of each stope. Volume of water required in winter months regularizes at 200 g.p.m.

Fine particles of water sprayed into the air passing through the stopes freeze into ice. And the heat given up in the process is transferred to return air.

Some 40,000 tons of ice were formed at the bottom of those stopes last winter.

This heat, along with that absorbed by the air from the large area of wall rock exposed in the stopes, added up to 15,000,000,000 B.t.u., or the equivalent of burning 100,000 gals. of oil or 850 tons of coal.

Although the surface temperature during the winter ranged to 25° below zero, the fresh air delivered from the main intake of the mine ventilation system (600 ft. below surface) varied only between 27° and 30° above zero as a result of its side trip through the ice stopes.

The mine's temperature eventually is expected to be held at an even 32° above zero.

Could this be perpetual motion in fruition?

## MUELLER BRASS CO.

### cavalcade of champions

the best performers  
in the refrigeration  
and air conditioning league



There never will be any errors charged to Streamline Packed Line Valves. When they're closed they're really an air-tight defense, and they go all out for fast, full flow when they're open. Simple to install, sleek and smooth in appearance.

### driers and strainers

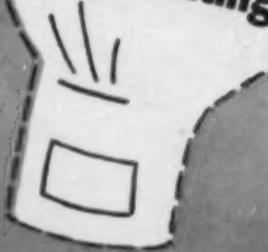


It's a big gain when you let Streamline Strainers and Driers block foreign matter in your refrigerant line. When Deluxe Driers tackle your moisture problem you've got a real "line backer" on the job.

You'll knockout trouble when you use Streamline Flare Fittings. They make a connection that wins a unanimous decision for speed and strength.

You can't tell the players without a program. Get your 1956 Streamline Roster today! We'll include a complete major and top minor league baseball schedule, too.

### flare fittings



**MUELLER BRASS CO. PORT HURON 9, MICHIGAN**



For more information about products advertised on this page use Information Center, page 22.



## Putting Price Tags on Benefits Helps Sell Air Conditioning to Home Buyers

WASHINGTON, D. C.—"It is difficult to put a dollar value on many of the benefits of residential air conditioning," admits Harry Ward, supervisor of residential merchandising for Frigidaire Div., General Motors Corp.

"But, based on a 90-day season, here's one way," he suggests. The following estimates are on a per-person basis.

1. Better sleeping at 10 cents per night	\$ 9.00
2. Better appetites: savings on food formerly wasted at 2¢ per meal or 6¢ per day	5.40
3. Feel better: fewer medical bills at 15¢ a day	13.50
4. Greater comfort: less perspiring and soiling of clothes for lower laundry, dry cleaning bills at 5¢ a day	4.50
5. Less irritability and improved dispositions: Insurance to reduce arguments at 5¢ a day	4.50
6. Less outside entertainment: from Austin report \$5.80 per week per family	25.00
7. Cleaner home: less summer decorating at 12¢ per day	10.80
8. More energy and zest, more alert, grasp opportunities; reduced expenses for cold drinks, etc., at 15¢ per day	13.50
9. Less mileage on family car by eliminating rides to cool off; 10 miles per week at 6¢ per mile	7.80
10. Planned vacations instead of "just to escape the heat." No estimate, though have had reports of savings of \$100 and more per year.	

Yearly estimated value of air conditioning per person  
Average three persons per family  
Average maintenance per year  
Balance  
Average cost of operation

94.00  
282.00  
30.00  
\$ 252.00

based on 90-day season based on 2¢ per kWh. electrical cost on 5,000 kWh. .... 100.00  
Balance ..... \$ 152.00

Minimum expected life of equipment—10 years \$1,520.00  
The above costs and estimates are based on a 2-ton air-cooled unit using average conditions plus moderate safety factors to assure conservative conclusions.

With such figures as these, Ward indicated, the air conditioning salesman or builder can prove to the home buyer that the value he receives is more than he will spend.

### Westinghouse Names Outlet

PITTSBURGH—The Air Conditioning Div. of the Westinghouse Electric Corp. announces appointment of Westinghouse Electric Supply Co. of Richmond, Va. as distributor for its packaged residential air conditioners, "Precipitron" electronic air cleaners, and speed heaters.

public relations departments of Crosley.

Ryan is a graduate of Kent State University, Kent, Ohio. He saw service on three Ohio newspapers, the *Akron Beacon Journal*, *Canton Repository*, and *Marion Star*, before his appointment as public relations manager of the Ravenna Ordnance Plant in 1941.

### UsAircos Adds Dealer In Patchogue, N. Y.

PHILADELPHIA—Mazzotti & Russo of Patchogue, N. Y., has been named a dealer by United States Air Conditioning Corp., it is announced by R. P. Kelley, general sales manager of UsAircos.

Headed by Bob Mazzotti and Joe Russo, the firm will handle a full line of residential, commercial, and industrial packaged air conditioning equipment, it was reported.

# WHY PAY MORE

FOR CONDENSER CLEANER WHEN  
THE BEST COSTS 30% LESS?

ANCO CONDENSER CLEANER is second to none for effectiveness, speed and safety, yet it costs about 30% less than other leading brands. This exclusive formula is simply dissolved in the sump while the system is in operation. Within a few hours, the condenser tubes are free of scale and head pressure is down to normal. ANCO is safe for servicemen to use and absolutely harmless to equipment. So why pay more when you can't buy better? Buy ANCO CONDENSER CLEANER and make more profit on every cleaning job.



**COMPARE THE COST**  
This 12-pound carton costs less than the 10-pound carton of other leading brands.

**FREE!**

### WATER TREATMENT MANUAL

A complete booklet on the control of scale, rust and algae in refrigeration and air conditioning systems. No service department should be without a copy. It's yours for the asking.

Sold by wholesalers of air conditioning and refrigeration supplies



**Anderson Chemical Company, Inc.**

Box 1424 • MACON, GEORGIA • Phone 5-0466

AIR-CONDITIONING  
MOTORS  
NEVER BURN OUT



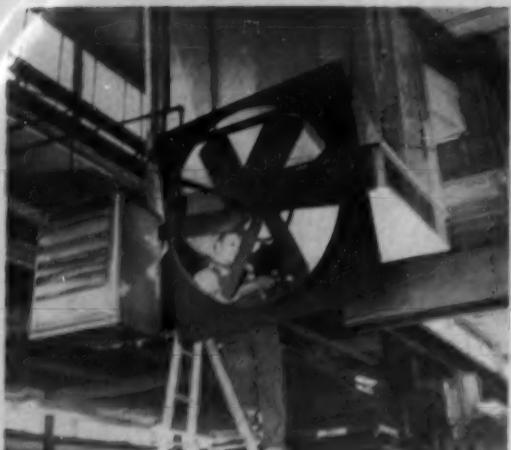
when protected with

**MIGHTY MITE**  
MOTOR PROTECTORS

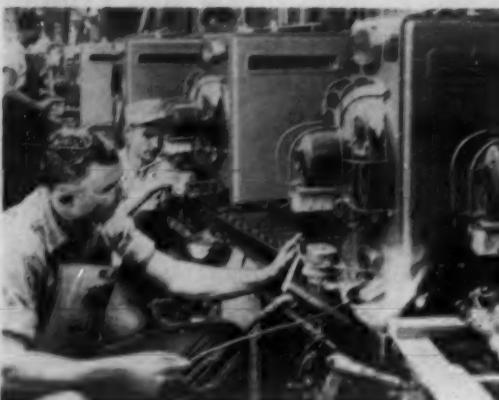
MECHANICAL INDUSTRIES  
PRODUCTION COMPANY  
223 ASH STREET • AKRON, OHIO

For more information about products advertised on this page use Information Center, page 22.

## Bryant Producing Unit Heaters In Air Conditioned Texas Plant



SOME 110 of these 48-in. fans were replaced by 15 air handling units like the one behind the fan in this picture. At left is a Bryant unit heater of the type used to heat the Tyler, Texas plant.



FINAL testing is done on an assembly line of Bryant unit heaters at the newly air conditioned Tyler plant. The benefits of air conditioning, the company says, will cause workers like these to be more efficient, have less absenteeism, and be better able to meet quality standards.



TELLING Lee Cook, left, assistant general manager of Texas Power & Light, not to expect his Bryant air conditioner to be gold-plated like this one is William Bynum, Carrier Corp. president. The 1 1/4-ton model was set up as a display in the grand ballroom of the Carlton hotel in Tyler. The roses are prize-winning tea roses, honoring Tyler as the "Rose Center of the World."

### 25-Ton Packaged Units Air Condition RCA Lab, Help Preserve Drawings

ALEXANDRIA, Va. — First 25-ton packaged air conditioners installed in this area were recently placed in RCA Laboratories here by Wilson Supply Co., Inc., according to Alexander MacLean, vice president of the Airtemp distributorship.

MacLean installed two 25-ton units and two 10-ton units in the research laboratories. They not only provide comfortable temperatures for the engineers working there, but they also help preserve valuable drawings that were being ruined by the high humidity prevalent during the summer months here.

Overhead ducts not only cool the open engineering area in the 100-ft. long building, but they branch off to cool individual executive offices through the high wall and ceiling diffusers. One hundred per cent recirculated air is used.

MacLean said that he sold the job through Koplin & Juliano, builder who constructed the building. The four separate units were selected because the building is so constructed that it can be divided into individual stores at a later date, if necessary.

#### Open Cooled Market

NEW ORLEANS—Air conditioned and with modern refrigeration equipment installed, a new National Food Store, 11th outlet of the chain in New Orleans, has formally opened at 2714 Jefferson Highway, in the Jefferson Plaza Shopping Center.

**FOR DEHYDRATING AND TESTING...**  
**BEACH-RUSS**  
**Portable**  
**VACUUM PUMPS**  
**COMPACT**      **RUGGED**  
**LIGHTWEIGHT**

Model O Single-Stage Pump—1 mm. vacuum, blank flange, 1 CFM,  $\frac{1}{2}$  HP, weight 48 lbs.

Model A Two-Stage Pump—1/10 mm. vacuum, blank flange, 2.5 CFM,  $\frac{1}{2}$  HP, weight 80 lbs.

Write for prices and data.

**BEACH-RUSS COMPANY**  
32 CHURCH ST. • NEW YORK 7, N.Y.

## ...SO HALSTEAD & MITCHELL ENGINEERS DESIGNED AIR-COOLED CONDENSERS FOR SIMPLER MULTIPLE CIRCUITING

Selecting circuits and manifolding when connecting several air conditioning and refrigeration units to a single remote air-cooled condenser can be expensive unless the air-cooled condenser is designed for the simplicity that means low labor costs.

That's why it's real news that Halstead & Mitchell engineers have devised a remote air-cooled condenser especially for extra-easy multi-circuiting. As costs come down, your sales go up.

The Halstead & Mitchell Air-Cooled Condenser has been designed with several *no-cost* extras like this easier multiple circuiting. Only Halstead & Mitchell offers, for instance, "Turbu-Flo"® finned surface

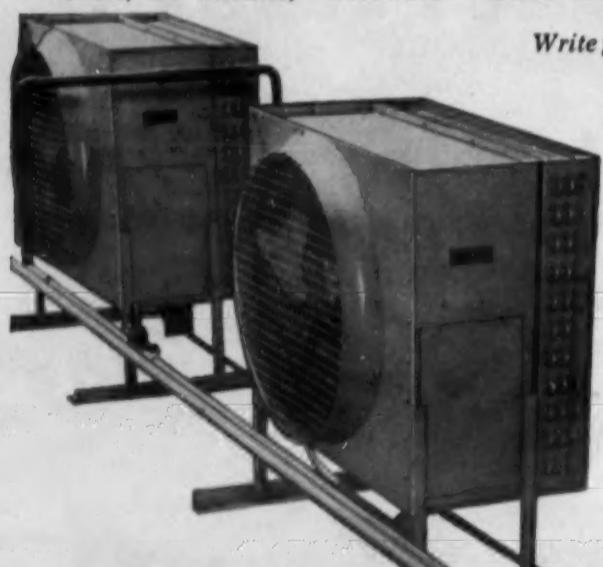
which provides added heat transfer to give you *extra-safe* capacity ratings. No need to worry when you recommend H & M.

There are extra years of working life, too, for Halstead & Mitchell's superiority in cooling tower steel protection has been used to keep air-cooled condensers free from rusting. The tubing assembly is self-reinforcing, locking out vibration before it starts.

Lifetime ball bearings and deep-pitch, slow-speed fans make for quiet operation. It's the assured operation you look for when you select Halstead & Mitchell, manufacturer of the industry's broadest line of water-saving devices for air conditioning and refrigeration.

Write for Bulletin AC-100

HALSTEAD & MITCHELL • BESSEMER BLDG. • PITTSBURGH 22, PA.



**HM**  
**Halstead & Mitchell**

For more information about products advertised on this page use Information Center, page 22.

## Crosley Bendix Offers Dealers Full Protection In Sales Financing Plan

CINCINNATI — Crosley and Bendix dealers, in August, will be offered a new finance plan "designed to take the credit risk out of selling and afford the dealers complete protection with every sale they make."

The plan, according to D. B. Blatz, general controller for the Avco Mfg. Corp. divisions, encompasses both distributors and dealers. Details were revealed to distributors during the recent conferences in Cincinnati at which 1957 laundry and television lines were introduced.

For 40% of a dealer's volume in a single Crosley or Bendix product, or in both product lines, the distributor will agree to repurchase from the dealer all repossessions, at the dealer's repurchase price from the bank.

"This is over and above any arrangements the dealer might have with his local bank, whether it is full-recourse, limited, or non-recourse," Blatz explained.

With dealers buying on extended terms from distributors, Crosley and Bendix, through trade acceptances on a 12-month basis on terms up to six months, will supply its distributors with sufficient capital to permit competitive operation, it was stated.

Varied terms are available for the distributors, based on 30 days and in increments of 30 days to six months. "The interest rate is ascending according to the terms the distributor selects, and at top rates is commensurate with bank rates."

"This means that dealers can continue doing business with their local banks, but in addition be assured that whatever happens following sale and acceptance of paper, they will be underwritten by their distributors, and by the factory," the executive declared.

The factory is setting aside a reserve to take care of repossessions, based on a fixed percentage of its sales.

The dealer, in effect, has a non-recourse arrangement with his distributor, regardless of the recourse arrangement he has with his bank.

## Westinghouse Appoints Pfeiffer In Engineering

COLUMBUS, Ohio — A. J. Pfeiffer, veteran household refrigeration engineer, recently

was named assistant manager of Westinghouse refrigerator-freezer engineering here.

O. H. Yoxsimer, department manager, announced the appointment effective immediately. For the past 24 years, Pfeiffer has been with Crosley in Richmond, Ind. and Cincinnati, most recently as manager of refrigerator, freezer, and air conditioning engineering.

A member of the American Society of Refrigerating Engineers, Pfeiffer attended the University of Dayton and later took additional work at the University of Cincinnati.



W. C. FISHER



H. P. BULL



E. T. EPPERSON



D. O. KLEIN

## Norge Ups 4; Bull To Head Distribution

CHICAGO — Harold P. Bull has been appointed vice presi-

dent of distribution of Norge Div., Borg-Warner Corp., Judson S. Sayre, president, announced.

Bull will be in charge of national Norge home appliance marketing, including supervision of product and sales managers, effective immediately. Bull has directed operations and sales to and through Norge distributors for the past two years.

Many of Bull's responsibilities were formerly held by R. C. Connell, vice president of sales.

Walter C. Fisher, field sales manager, has been promoted to the position of general sales manager, responsible for the administration of national sales programs.

Dick O. Klein is the new field sales manager, moving up from his position as midwestern sales division manager. Klein will direct the Norge field sales organization from Chicago.

E. T. Epperson, previously on the field sales staff, has been named midwestern sales division

manager, responsible for sales to Norge distributors in the midwestern states.

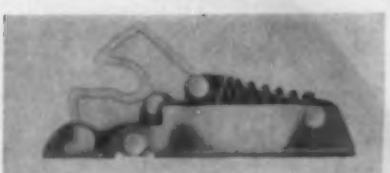
"Bull is the architect of our distributor organization, which tripled sales in two years, and Fisher has been a key figure in building our effective field sales force. Klein and Epperson have demonstrated capability for top sales executive positions," Sayre commented.

## Refrigerator, Freezer Latch Released by Inside Push, Outside Pull

ROCKFORD, Ill. — A new latching mechanism for use on refrigerator and freezer cabinet doors was recently announced by National Lock Co. here.

Called "Safety-Latch," the new mechanism is released by push on inside of door . . . or pull on outside of door.

Used with an inoperative type



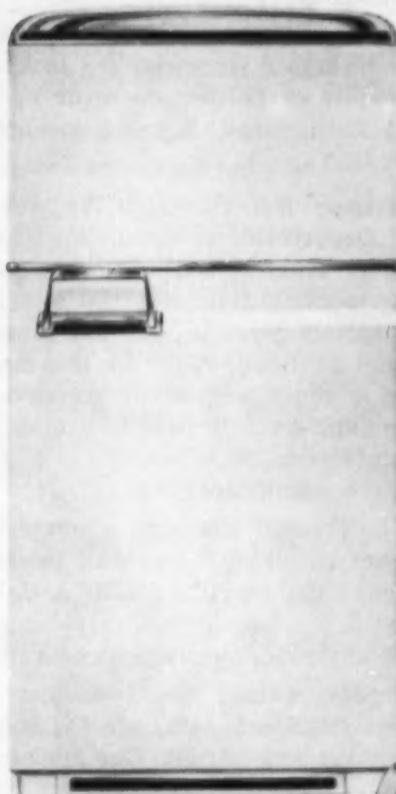
door handle and roller-type strike, the latch does not require a handle actuating device, the company said. Door handle can be positioned anywhere on latching side providing new freedom of handle styling and eliminating the linkage problem, the manufacturer claimed.

If mechanism bolt is accidentally tripped when door is open, door can still be closed without difficulty, it added.

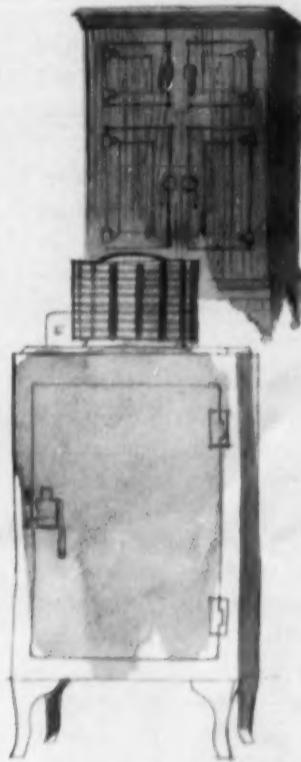
Unit is small and compact for mounting vertically or horizontally on right or left-hand doors. It is quickly and easily installed on the production line.

According to National Lock, the new hardware product is low in price, completely tooled, and ready for shipment.

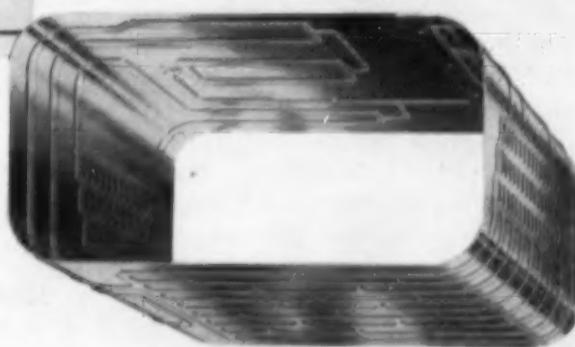
right now the  
biggest change  
is to patented  
Roll-Bond  
evaporators



U. S. PAT. NO. 2,690,002  
(and other patents pending)



for flexibility,  
better refrigeration,  
lower costs,  
trouble-free service!



Refrigeration has taken giant strides since the days of the iceman, but no step has been as revolutionary as the advance brought about by Roll-Bond evaporators. This brand-new method of placing refrigeration circuits inside single homogeneous sheets of aluminum was pioneered by Olin Mathieson Chemical Corporation and has been proven in over 2,000,000 refrigerators all over America. At a single stroke of engineering know-how, problems of frost blisters, low conductivity welds, separation and leakage were banished forever. Remember this — the Roll-Bond process developed by Olin Mathieson is the original patented method — don't settle for less. See the leader first. Write for new brochure for more detail.



Write for new brochure  
explaining ROLL-BOND  
process and its applications

WESTERN BRASS MILLS DIVISION - OLIN MATHIESON CHEMICAL CORPORATION

EAST ALTON, ILLINOIS

# They'll Do It Every Time

by

Jimmy Hatlo



## Best Bargains in the Labor Market: Experienced Men 50 Years Young

What's wrong with middle age? Rather, what's wrong with employers? Skilled and knowledgeable employees are getting scarcer. Yet, experienced men in the so-called "middle age" brackets find it difficult to get placed whenever, for reasons beyond their control, they have to seek employment.

Arthur Larson, United States Under-secretary of Labor, declares that the failure of American business executives to tap the hard-won EXPERIENCE which is abundantly available in middle-age men is paradoxical indeed.

**"At a time when shortage of skills** is both a present and prospective bottleneck in the full realization of our productive potential, most employers are bemoaning the shortage of experienced men of all sorts. Simultaneously, they still are imposing age restrictions when they hire."

A few brave corporations are bucking this ridiculous shibboleth.

Example: Carson Pirie Scott & Co., a Chicago department store, has hired 555 men older than 50 this year—nearly a fifth of its total payroll. Declares a Carson official: "We think the older person puts a higher value on working. We've found our turnover and absenteeism among middle-age people is generally less than normal rates."

**"Hiring employees over 40** is good business," reports Bell & Howell Co., Chicago maker of photographic equipment. "Except in a few jobs, any slowing of speed by older workers usually is more than made up by added reliability and quality workmanship."

Chicago's Office Management Association polled 170 corporations as to their results in hiring new employees in the middle age brackets. In the 40-to-50 age group, 138 companies reported "excellent" or "good" results, while eight firms said "fair" and only one firm replied "poor." Between the ages of 50 and 60, 17 companies claimed "excellent" results, 82 firms said "good," 18 had "fair" results, and two admitted "poor."

"Companies which insist on promoting from within when they don't have enough men worth promoting are making a mistake by turning down qualified middle-age applicants," declares John Gagnon, personnel director for Olin Mathieson Chemical Corp.

Other corporations agree. Let's examine reports from a special Bureau of Employment Security study of Detroit employables. That research establishes the fact that heaviest concentration of unemployed older workers is in the 45-54 age bracket, followed closely by the 55-64 age group.

Are these unemployed middle-agers looking for jobs because they can't do good work? Answer:

**In Detroit 23% of unemployed men** 45 and older were classified as skilled, compared with only 9% of the unemployed under 45. Said research also shows that middle-age men change jobs much less frequently than fellows in their 20's and 30's—which is a great advantage to an employer anxious to avoid the cost of frequent turnover.

Proof: in the Detroit area examination, 64% of the unemployed older workers had held only one job during the preceding three years, compared with 38% for workers under 45.

Now for the supposedly Big Handicap to the hiring of men who are in the Prime of Life. Does the employment of men in their Fifties unduly increase corporate pension costs?

**Answer: No!** Research by the U. S. Labor Department is dissolving this unreal difficulty. The true cost of pensions isn't the current contribution, but the amount that is ultimately paid to the individual. And the amount finally paid to the man hired young is much higher in proportion than the amount actually paid to a man hired in his late forties or fifties.

That's significant!

"The pension situation is overrated as a deterrent to hiring," avers an International Harvester Co. executive. "In a tight labor market it is cheaper to hire older men and absorb any piddling pension costs involved."

Employers and union leaders already have made a few suggestions for overcoming the pension cost hurdle. One answer is high minimum eligibility requirements for a pension. Other solutions include a voluntary waiver of pension rights by Prime-of-Life men in return for a challenging job.

Here's hoping it won't be long before those cryptic myths about middle-age men being undesirable are exploded forever.

**Such men are the Real Bargains** of today's hungry Labor Market. They know what to do, they know Who, they are responsible, they stay on the job, and their health (having survived life's many hazards this far) normally is far above average.

Their biggest handicap has been the pension angle. Now that this small-print obstacle has been erased by insurance company fiduciaries, there's no reason on God's green Earth why any employer shouldn't be glad to hire eager-to-serve EXPERIENCED men whenever he has the opportunity.

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VOLUME 78, NO. 16, SERIAL NO. 1,431 AUGUST 20, 1956

"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care."—Charles A. Dana.



### SCHOOLS SEEK MEN TO TRAIN AS MECHANICS

Commercial Trades Institute  
Birmingham, Ala.

Editor:

We read with much interest your editorial in the July 16 issue of the NEWS.

For many years we have operated a successful training program for men entering the installation, maintenance, and service phase of the refrigeration and air conditioning business. We have maintained comparatively high standards as to staff, plant, and curriculum. Applicants have been carefully screened and as a result, placement of graduates is no trouble.

Training of mechanics is no problem. The qualified schools can handle that. The problem

faced by the industry in this respect is that of getting young men interested in entering the field and in some way help them through their training period.

Due to the use of large sealed compressors in "packaged units," it seems that in some quarters, the need for trained mechanics is thought no longer to exist which, of course, is untrue. This is one factor which is leading to the franchising of unqualified dealerships and future headaches for all concerned.

We believe you, more than anyone else, can bring this to the attention of industry and the public. We would appreciate your opinion on this matter.

E. V. OAKWOOD,  
Vice President,  
In Charge of Training

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### Trane Bulletin on CenTraVacs Revised

#### KEY NO. R-830

LA CROSSE, Wis.—A revised "CenTraVac" bulletin has been announced by The Trane Co., which is celebrating the 18th year it has manufactured the hermetic centrifugal refrigeration units to provide chilled water for air conditioning and refrigeration.

The latest version of the bulletin now has complete information on the largest-capacity Trane centrifugals—"Duplex" CenTraVacs.

Duplex CenTraVacs have two compressors located on the same side of a single evaporator and condenser, with a capacity of 1,500 tons of refrigeration possible when using the largest machine, the company said.

The bulletin, DS-399, includes complete capacity tables, water pressure drop charts, engineering data, etc. on the centrifugal line.

### 2-Color Folder Covers Vacuum, Pressure Gauges

#### KEY NO. R-831

HAMPTON, Va.—A four-page, two-color folder covering vacuum and pressure gauges was recently issued by Hastings-Raydist, Inc.

Described and illustrated in catalog 140 are models LV-1 and GV-3 vacuum gauges, an absolute pressure indicator, and an electronic manometer.

### Detroit Blower Tells 'Silent-Vent' Story

#### KEY NO. R-832

FRANKLIN PARK, Ill.—The "complete story" on Detroit Blower Co.'s new "Silent-Vent" axial roof ventilator is now available in illustrated bulletin form.

Detailed information and accurate performance tables in the bulletin (DWA-101) explain how the Silent-Vent roof exhauster is able to improve ventilating efficiency at low wheel tip speeds, the company stated. The exhaust dissipation operating principle behind the vaned ventilator head is also related.

### Preway Describes Built-In Combination

#### KEY NO. R-833

WISCONSIN RAPIDS, Wis.—Preway Inc. here recently issued an illustrated four-page bulletin on its new built-in refrigerator-freezer.

Specifications, installation diagram, and description of the unit are included in No. 551 bulletin.

### Welding Data Book Issued by Eutectic

#### KEY NO. R-834

FLUSHING, N. Y.—A new 140-page pocket data book (TIS 2575) featuring simplified welding procedures for every base metal was recently made available from Technical Information Service, Eutectic Welding Alloys Corp.

Covering 120 welding rods, electrodes, and welding compounds, the data book is a guide to improved torch and metallic arc welding, brazing, and soldering, the company said.

"How-to-weld" information is given for fabrication, maintenance

repair and salvage, overlaying for wear and corrosion resistance, and welding dirty, rusted parts. Special applications such as joints with high electrical conductivity, resistance to chemicals, tinning, and plating are covered.

Data is also given on methods of gouging, chamfering, and removing unwanted metal without special equipment. Best torch adjustments and electrode position and manipulation are featured, it was noted. Improved results through use of correct fluxes is explained alloy-by-alloy.

### Nor-Lake Sheet Details Lo-Boy Beverage Coolers

#### KEY NO. R-835

HUDSON, Wis.—Specifications and construction features of the new line of Nor-Lake "Lo-Boy" beverage coolers are contained in a two-side catalog sheet available from Nor-Lake, Inc.

Known as Form LB-5, the sheet features illustrations and cutaway drawings of the various models. Remote and self-contained units are described.



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- Better performance — from domestic refrigerators, water coolers, drink dispensers, ice cream and drink dispensers, home freezers, ice-cubers, etc.



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For more information about products advertised on this page use Information Center, page 22.



**What To Do When  
No One's at Home**

BRYN MAWR, Pa.—A local air conditioning and refrigeration dealer devised a way to show customers the firm's servicemen are prompt on service calls and reduce calls to homes where no one is in.

When Adkins-Latta Co. servicemen answer a call and find the house empty, a notice is placed over the door knob saying, "Sorry we missed you."

The 2½ by 5¼-in. card also adds that a return call will be made on a specific date. If the customer will not be present at that time he should "please phone" this number.

Besides helping to show customers the firm's servicemen are prompt, and providing notice of the call, Adkins-Latta believes they are excellent goodwill builders.

**Industrial Contractor  
Offers New Services  
In Piping Field**

PHILADELPHIA—George S. Truskey, Inc. here, for the past ten years industrial contractor and contractor specializing in pipefitting, heating, and plumbing for industrial concerns in greater Philadelphia, New Jersey, Delaware, and Maryland, has announced an expansion of its services and organization, and a change of name.

The firm will now be known as Truskey Industrial Pipefitters, Inc., and its construction and engineering services have been expanded to include industrial air conditioning, process piping, ventilating systems, and waste disposal and water treatment work, in addition to plumbing and heating. It was further explained.

**Ashcraft Co. Handles****Baltimore Aircoil**

BALTIMORE—J. P. Ashcraft Co., Inc. has been appointed exclusive sales representative in northern Texas and Louisiana for Baltimore Aircoil Co., Inc.

With offices in Dallas, Fort Worth, Shreveport and Lubbock, the Ashcraft company has nine sales engineers.

J. P. Ashcraft, president of the organization, is a member of the ASHAE and an associate wholesale member of the Air Conditioning Contractors Association of Dallas.

**Moves To New Bldg.**

WAUSAU, Wis.—Wausau Furnace Co., local heating and cooling equipment sales and service firm, recently held a grand opening in its new location at the corner of 2nd and McClellan Sts.

**Having Scale Troubles?****Advice Is Offered for Removal of  
Silica and Calcium Sulfate Scales**

W. NORFOLK, Va.—Some not readily dissolve in acid solutions, other means of removal must be adopted. The following procedure will often be effective:

1. Add to the sump water and dissolve 1 lb. of soda ash (sodium carbonate) for each 5 gals. of water capacity.

2. Allow this solution to circulate for several hours. Then drain completely without fresh water rinse.

3. Now apply the scale removers, either solid or liquid, according to directions.

"What happens is this: The alkali or soda ash attacks the silica and opens pores in the scale through which the acid cleaners can later penetrate and loosen the scale.

"Scales which contain little silica but are composed mainly of calcium sulfate usually respond to Virginia liquid scale remover at high concentration; 4 gals. of liquid remover for each 15 gals. of water.

"Try a small sample of the scale in liquid cleaner diluted with one, two, and three volumes of water. Use the most dilute concentration that will slowly disintegrate the scale.

"There are cases when scale is coated with a film of grease, which prevents penetration by acid cleaners, solid or liquid. For such cases the following procedure is recommended.

1. Obtain at any grocery store the necessary quantity of 'Dash,' a new detergent manufactured by Proctor & Gamble. It is available in boxes containing 1½ lbs. each.

2. As a pre-treatment, add Dash at the rate of 1 lb. per 100 gals. of water in the system.

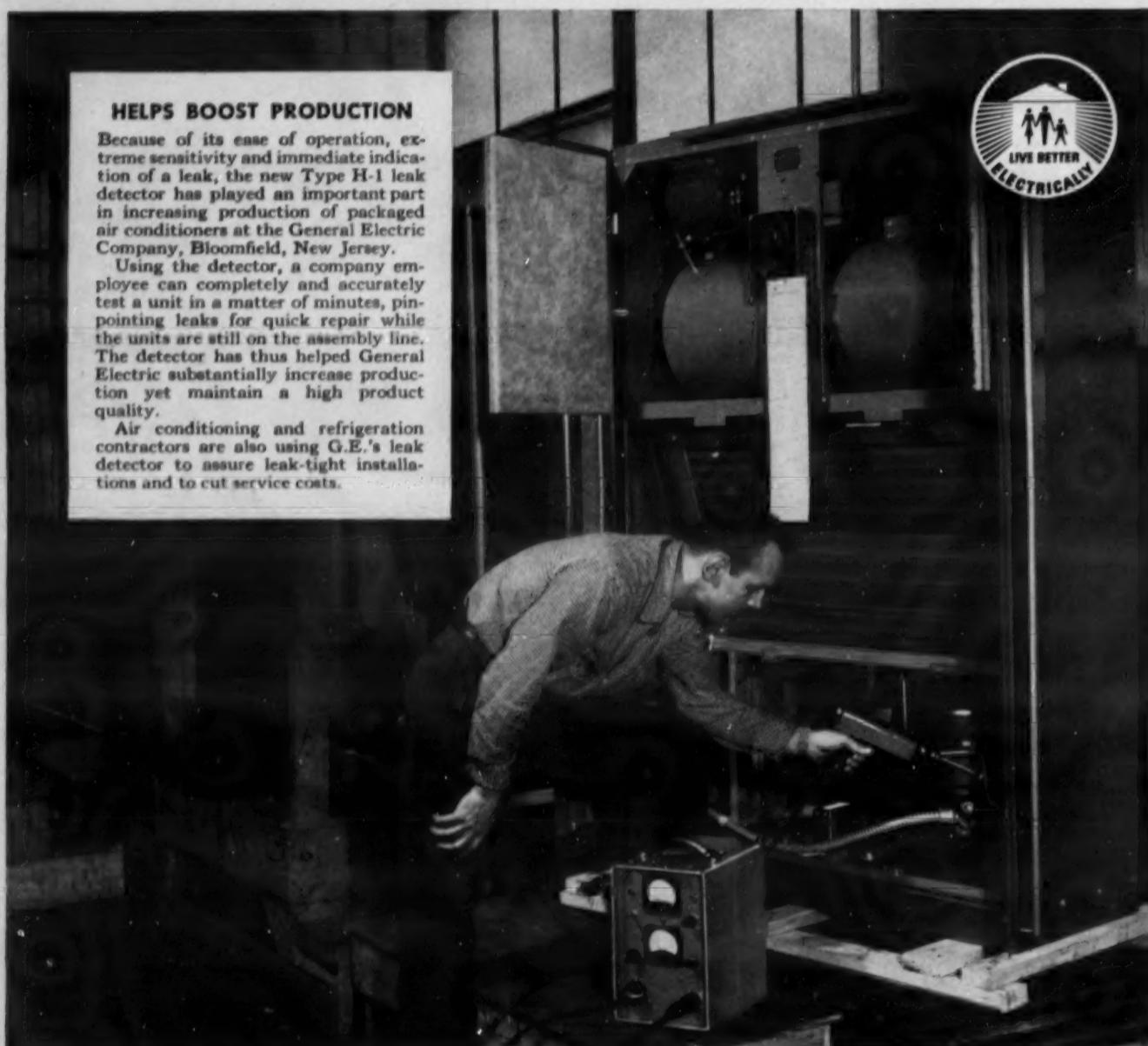
3. Circulate this solution for a few minutes just to be sure foaming is not excessive. Then add the recommended dosage of liquid or solid cleaner.

"Dash has been field tested and will remove many greases including such resistant films as heavy automobile cup grease."

**Packless Metal Hose  
Names Johnson In Sales**

NEW ROCHELLE, N. Y.—Packless Metal Hose, Inc., manufacturer of flexible metal hose and couplings, has announced the appointment of Murray B. Johnson as sales manager.

Johnson was formerly employed as regional sales manager for Warner-Patterson.



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Existing light has no effect on the efficiency of your inspection procedure with the General Electric Type H-1 Leak Detector and even unskilled operators can find leaks so small that in 100 years, only one ounce of Freon® gas would escape.

A true leak signal is assured because the Type H-1 detector automatically offsets slow changes in background concentrations of halogen gases. Only a true leak of halogen gas causes a response. Leaks are indicated by an instrument dial as well as by a variable-pitch loudspeaker or earphones.

Readily portable, the unit weighs only 24½ pounds. It is well suited to use in your shop as well as for service testing in the field wherever alternating current is available.

For more information, call your G-E Apparatus Sales Office or write for bulletin GEC-233 to Section 585-55, General Electric Co., Schenectady 5, N.Y.

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## Step-by-Step Booklet Tells How To Install New Radiant Baseboard Heating Accessories

CHICAGO—Crane Co. has recently introduced a new line of steel accessories for radiant baseboard and published a new booklet telling the step-by-step story of how to install baseboard heating, according to W. A. Burbine, director of heating sales.

The baseboard accessories, all die-formed from furniture steel, include a new unit: the outside corner. Also carried in the new line are steel extension panels, inside corners, right and left hand end caps, and junction plates.

The accessories, for use with either Crane Type R or Type RC baseboard, simply slide into position, where they are held permanently in place by spring

clips. The new accessories permit installation of radiant baseboard in most buildings having irregular floor plans.

The new Crane baseboard installation booklet contains 14 pages of step-by-step instructions, illustrated by photographs. The booklet shows how to assemble sections of baseboard and how to install them: Crane Type RC radiant convector baseboard at the floor, and Type R radiant baseboard at both floor and ceiling.

Also described is the use of each item in the new line.

### Firm Granted Charter

TOPEKA, Kan.—McElroy Refrigeration & Heating, Inc., Topeka, has been granted a charter.

## Low Pressure, Hot Water Heating Inspection Law Urged for Des Moines

DES MOINES, Iowa—Enactment of a municipal ordinance requiring inspection of low pressure and hot water heating systems was urged on City Council here by the Mechanical Trades Association and Local 33 of the Plumbers and Steamfitters union. The request was referred to the city's legal department.

J. R. Denann of the MTA and Wilton M. Seymour of the union described the danger of poorly installed heating systems. They said low pressure systems of less than 15 lbs. pressure are the big units installed in schools and larger buildings.

Seymour said past councils had agreed on need of an inspection system, such as is required in Des Moines for electric



THIS "Golden Dust-Stop" air filter composed of ultra-thin glass fibers was recently introduced by Owens-Corning Fiberglas Corp. Available for both frame and pad type applications, featuring gold-colored packaging, the filter is obtainable from heating and air conditioning suppliers and hardware stores. Frame filters come either singly or in four-packs in the "Filter Roll" package.

wiring.

Seymour said, if passed, the ordinance would apply only to new construction or remodeling now in use.

## Phoenix Now Permits Cotton-Covered Cable, Re-sets Plumbing Code

PHOENIX, Ariz.—Ordinances revising local plumbing and electrical codes were adopted recently by City Council here.

One ordinance creates a position similar to the former "master plumber" provision in the plumbing code. The other provides for use of cotton-covered cable instead of metal in residential construction.

The plumbing code change stemmed from an episode that caused revocation of a contractor's plumbing license, a plumbing foreman's license, and temporary suspension of five journeymen, it was reported.

This case involved installation of substandard soil pipe in the recently-built First National Bank building. During the plumbing board hearing it was brought out that journeymen plumbers were ultimately responsible for a job being done according to the city code.

A plumber was liable to lose his license if he didn't comply with the code, even though his superior might order him to perform an anti-code installation, it was added.

The electrical code change was voted because so much property, recently annexed to the city, has buildings using the cotton-covered cable.

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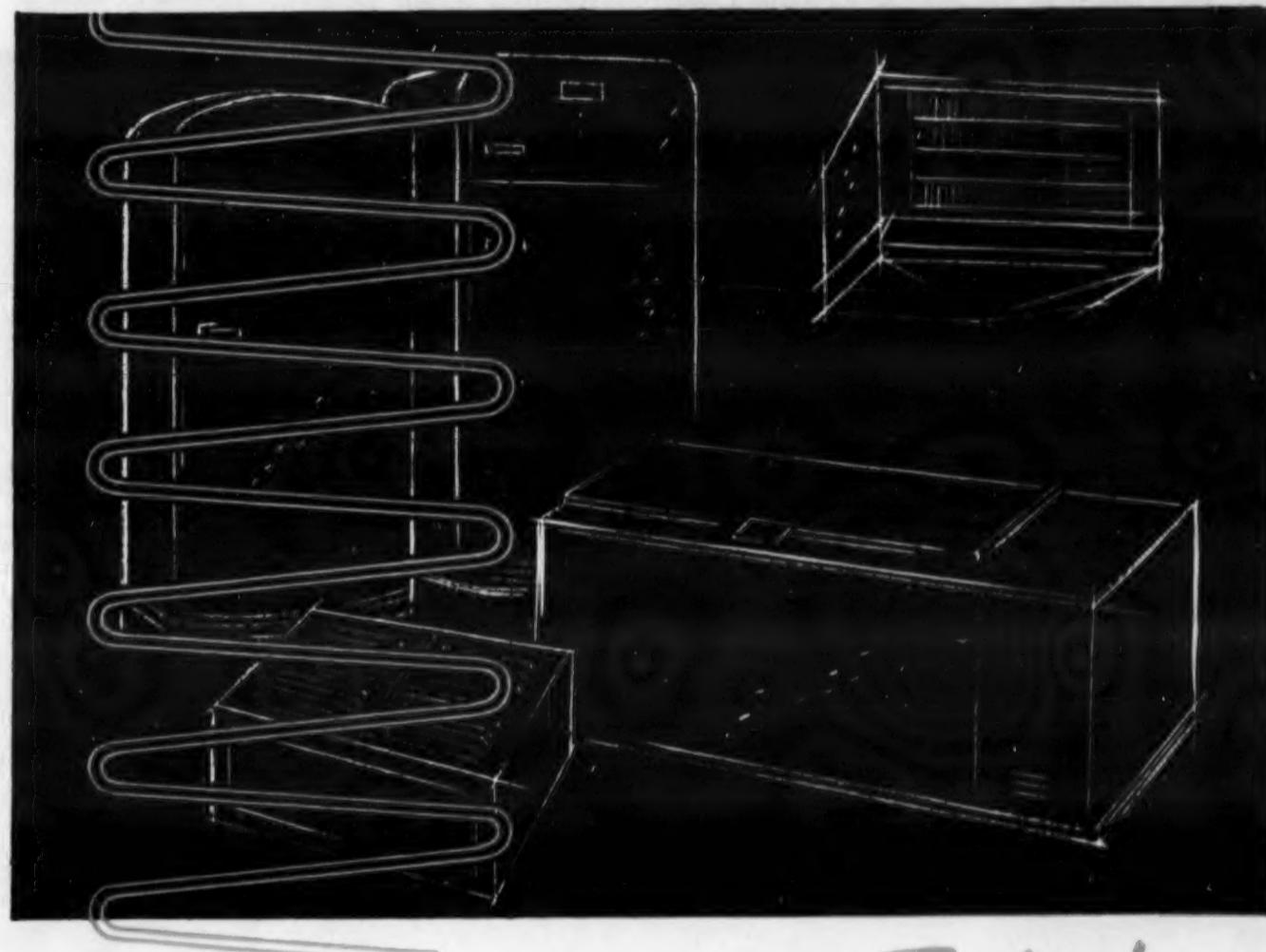


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WISCONSIN William Clark

## South Bend Independent Market Uses Ideas Others Only Talk About

By John O. Sweet and  
George M. Hanning

SOUTH BEND, Ind.—Said to be the largest independent market in South Bend, the Greenwood IGA Supermarket incorporates several innovations that many other food store operators are still only talking about.

Of course, it's air conditioned, and it's completely self-service (except for one section), using Hussmann equipment installed by Baker-Ward, Inc.

The layout, also by Baker-Ward, is a modified IGA plan, with some aisles running at an angle and others straight. Angle aisles approaching the checkout stands were found to choke up traffic, according to Don Baker, Jr., sales manager for Baker-Ward.

To help speed traffic through the checkouts, which take in an

estimated \$80,000 a week, a special service section was set up. Away from the checkouts, customers can get rid of their empty bottles and buy candy, cigarettes by the package, and a variety of other small items normally sold by the cashiers in other stores. A single girl handles these details, leaving the cashiers free to concentrate on their job of punching the cash register.

Next to the service section is a courtesy booth where foot-weary patrons can sit down, relax, and sip a cup of coffee. The service counter girl serves the coffee, too. The store originally gave the coffee free but found customers appreciate the service more if a small charge is made.

Just inside the entrance to the store is a "Kiddie Corral"

where children can amuse themselves with comic books and toys while their parents are shopping. Parked here, the children can be collected on the way out, leaving the aisles free for shoppers.

Another feature of the market is an employe lounge located adjacent to restrooms at the rear of the store. Here, employees can take a "break" and sip a coke in peace, away from the sales floor.

All these features were added a year and a half ago when Robert Greenwood more than doubled the size of his market. The 100 by 182-ft. building was planned as the nucleus of a new shopping center which now includes a bank and variety store in addition to a large parking area.

(Continued on next page)



"PSYCHOLOGICALLY" COOLING customers as they enter the Greenwood IGA Supermarket is a 10-ton packaged air conditioner, one of three serving the store. Canned goods displayed in front of the unit last spring will be removed when cooling is turned on, pointed out Don Baker, Jr., sales manager of Baker-Ward.



COURTESY BOOTH and service section are among features of Greenwood IGA Supermarket in South Bend. Weary patrons can rest and get a cup of coffee at the booth. Service section is designed to reduce congestion at checkouts.



ALONG ONE WALL of the Greenwood IGA Supermarket are 57 ft. of self-service produce display cases. The cases are set 5 ft. out from the wall to provide space for clerks to service them from the rear.



INSTALLED BACK-TO-BACK, eight cases in South Bend's Greenwood IGA Supermarket offer shoppers a variety of frozen foods and ice cream. At left, customers study contents of a refrigerated poultry case at one end of the section. Against the wall, near the other end of the department, is another ice cream cabinet.

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Heat-treated for lowest rotor losses. Integral cooling fan and vented core. Dynamically balanced.

## Can Wheel Carts Into Meat Cooler

(Continued from preceding page)

Greenwood did not tear down and start from scratch but made the new addition an integral part of his old store. He did so well that it is hard to tell where old ends and new begins.

The enlarged store has a long, rectangular 15,000-sq. ft. selling area with service areas at the rear and completely conveyorized storage in the basement.

At one end of the selling area is a 57-ft.-long self-service produce display, of which 41 ft. is refrigerated. The row of cases is set 5 ft. out from the wall, providing space for clerks to service the cases from the rear.

Separating the selling area from the service area are 42½ ft. of multi-deck dairy cases, 22 ft. of frozen meat cases, and 54 ft. of fresh and smoked meat cases. The meat cases have sliding mirror backs through which they can be loaded directly from the packaging area. Meat specials are also displayed in three 5-ft. island merchandisers stationed across the aisle.

Eight frozen food cases, installed back-to-back, form an island at one end of the grocery section across the store from the produce department. At one end of the frozen food section, facing the meat cases, is a refrigerated poultry case. This department has 80 ft. of frozen food and ice cream cases.

In the service area, the old store incorporated a 41 by 24-ft. locker plant containing 220 lockers plus bulk storage space. Though lockers are still rented, more and more of the space is being used to store frozen foods.

Next to the locker room is a 15 by 24-ft. produce and dairy storage cooler. Located in the new addition is a large meat cutting and packaging room cooled to around 65° F. by two coil units suspended from the ceiling. It features automatic packaging equipment and a 30 by 15-ft. meat cooler.

The meat cooler is somewhat unusual, according to Baker, in that it has no raised floor. When the building was constructed, a 6-in. slab was laid at the cooler site so that it would be level with the floor. This enables packaging girls to roll their meat carts right into the cooler, without having to go up a step. A drain was also installed in the floor so the cooler can be hosed down for cleaning.

Just off the meat preparation room is a machine room housing nine condensing units mounted on two Hussmann double-deck racks. They serve the frozen food and meat cases. Units handling the other refrigeration equipment and the locker plant are located in the basement.

In add., there are 68 hp. of compressors for the refrigeration equipment. All are water-cooled and are served by a 75-ton cooling tower. A separate 30-ton tower is employed for the three packaged Typhoon air conditioners in the selling area.

While 28 tons of cooling is admittedly not enough to cool the whole store, the units do a satisfactory "psychological" job.

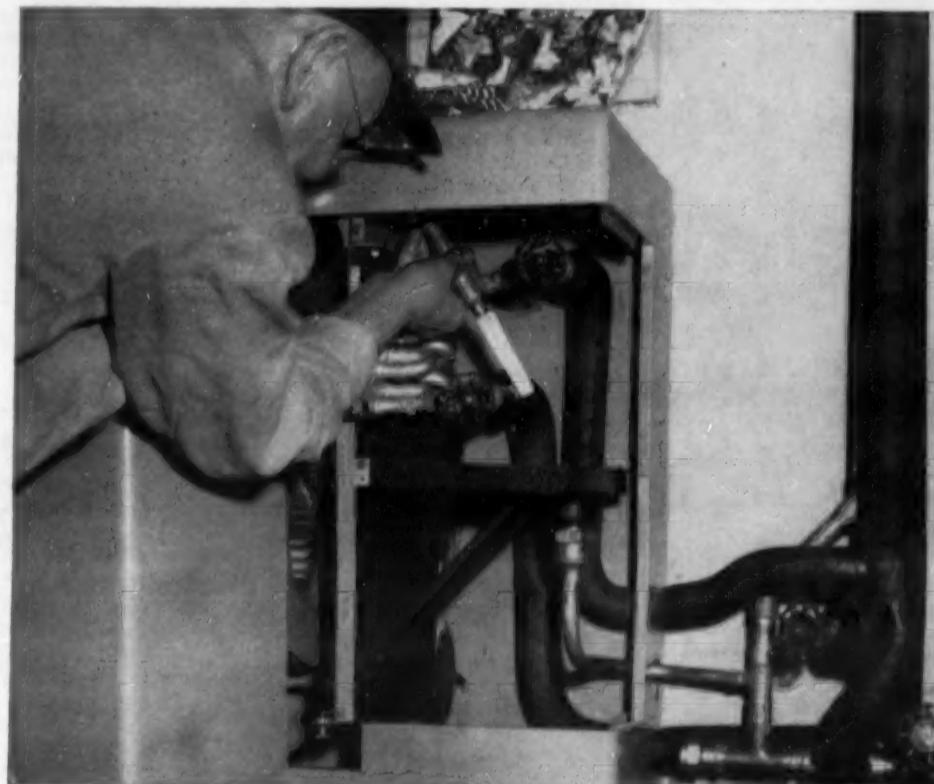
Baker said the store management believes that if the customers are cooled as they come



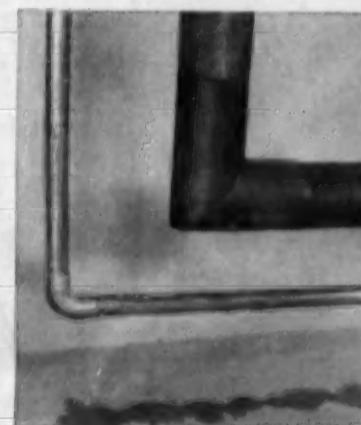
SHOPPER CHECKS frozen meats displayed by Greenwood IGA Supermarket in two cases. One of three island meat merchandisers is at left.



LOCATING MEAT CASES directly in front of meat cutting and packaging room in Greenwood IGA Supermarket permits loading of cabinets, directly from the room, through sliding mirror backs. At upper right is one of two ceiling-mounted coil units which cool the room to around 65° F.



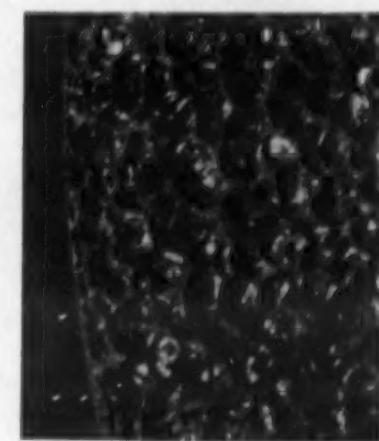
Neat and easy to apply, Armaflex can be slipped on pipes in one simple operation. If lines are already installed, slit Armaflex lengthwise, snap in place and seal with Armstrong 520 Adhesive.



No condensation under normal design conditions on indoor lines operating as low as 32° F., when you use ½" thick Armaflex. Vaporproof composition keeps material positively dry.



Self-extinguishing Armaflex can be installed on copper tubing, held back with clamps while fittings are being sweated, then slipped into place.



Completely vaporproof, Armaflex is made up of uniformly sized foamed plastic cells that seal out moisture and air, give Armaflex its low K-factor of 0.28 at 75° mean temperature.

## New insulation for liquid cooling lines stops dangerous condensation

Stop condensation on liquid cooling lines positively and lastingly with Armstrong Armaflex\*, a new, flexible pipe insulation.

Closed cellular structure and vapor-proof composition completely seal out air and moisture. No separate vapor barrier is needed. Insulating efficiency stays high because Armaflex stays dry. Great flexibility makes Armaflex remarkably easy to install. It can be slipped over pipes and tubing, following contours without cutting or fitting; or slit and snapped over pipes. The only sundry used is Armstrong 520 Ad-

hesive for cementing joints. Fittings can be insulated with miter-cut covers. Armaflex is clean to work with. It will not rub off, crumble, or chip. There's practically no waste. Self-extinguishing feature allows fittings to be sweated with Armaflex on lines.

Armaflex comes in 6' lengths, for pipes and tubing to 3½" i.d. It can be used on lines operating from 32° to 200° F. Free booklet with all details sent to you on request. Write for "Armstrong Armaflex, a Flexible Pipe Insulation," to Armstrong Cork Company, 2008 Parsons St., Lancaster, Penna.

**Armstrong**  
INDUSTRIAL INSULATIONS

\*TRADE-MARK

For more information about products advertised on this page use Information Center, page 22.

## Payne Offers Forced Air Wall Heater

KEY NO. F-830

MONROVIA, Calif.—Payne Div., Carrier Corp. here recently announced production of a new "Panelair" forced air wall heater.

Redesigned from the old unit, the model allows installation between normal wall studing, it was pointed out. In addition to normal front discharge, the unit is reported to have two optional grille locations: one at the side and another at the rear. This multiple discharge feature is said to permit heating three rooms simultaneously.

The unit is AGA approved for use with natural, manufactured, or mixed gas at 65,000 B.t.u.h. input, 63,000 with propane, and

54,000 with butane. There is no need for ductwork, the firm stated.

Thermostat, 100% shut off, controls fan and limits switches to provide automatic shut-off protection in event of overheating, ribbon-slot burner, and supplemental switch in blower compartment as double safeguard are factory equipment. A centrifugal blower delivers warm air at floor level and takes return from ceiling level. "Jetglas" lining protects the heating element from rust-out or burn-out, it was noted.

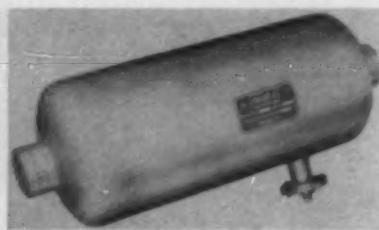
## Air Controls Produces 2 Return Air Grilles

KEY NO. F-831

COOPERSVILLE, Mich.—Two new air conditioning return air grilles have recently been announced by Air Control Products, Inc. here.

The grilles, designated 21-H for sidewall installations and 23-H for baseboard applications, are part of the Air Control No. 20 series.

Grilles differ from standard models in that their fins run hor-



## Oil Separator-Mufflers Cut System Noises

KEY NO. F-833

BREWSTER, N. Y.—Heat-X, Inc. has introduced a line of "OSM" oil separator-mufflers which are claimed to solve, in one unit, two problems common to refrigeration systems: silencing of system noises and separation of all oil entrained with hot gas from the compressor.

OSM units are also equipped with a mechanism which automatically returns to the crankcase all oil that is separated.

The manufacturer points out that ratings of the units are based on tonnage rather than horsepower, thereby permitting close matching of unit to requirements. This method of rating also eliminates the need to buy more capacity than is required, he said.

The new units have no floats which can hang open or stick closed. A positive action velocity pressure mechanism, exclusive with Heat-X, opens only when compressor is running and closes of its own weight when compressor stops.

Constructed to A.S.M.E. specifications, OSM units are available in a capacity range from 1 to 75 tons "F-12" and 1 to 100 tons "F-22."

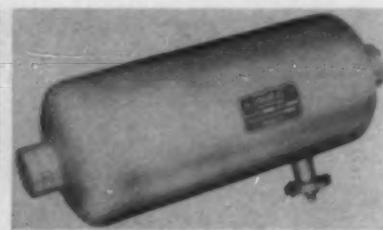


## Ero Introduces 2 Lines Of Conditioner Covers

KEY NO. F-832

CHICAGO—Two complete new lines of air conditioner covers for winter protection of window-type air conditioners have been designed and are being marketed by Ero Mfg. Co. here. A specially developed 22-oz. vinyl coated fabric, called "Ero-Tex," is used exclusively in a De Luxe Custom Fit line which is said to include a closed-type and a flap-type cover. Ero's economy line features a Universal-Type cover in a choice of two weatherproof materials, 12-gauge plastic and vinyl-coated fabric.

Affording protection against rain, snow, cold drafts, winter rust, and deterioration, the two lines feature an Ero cover for every popular window air conditioner made, according to the firm. Thirteen custom-fit sizes are designed to fit all  $\frac{1}{2}$  to 2-ton models. Secure, snug fit is maintained throughout the roughest weather by an elastic strip and safety clip. The Ero-Tex De Luxe cover is attractively finished with plastic bindings. So that the unit may be operated in in-between months while the cover is on, Ero makes a Flap Type style as well as a Closed Type, it was further pointed out.



## G-E Has Low Powered Indicating Instrument

KEY NO. F-834

SCHENECTADY, N. Y.—General Electric Co. has introduced a line of high-accuracy portable indicating instruments which are lower in price and require less power from measured circuits than the long-established type P-3 instruments being replaced, the company announced.

The type AP-12 (a.c./d.c.) portable standards have an accuracy of 0.25% full scale and the matching type AP-11 (a.c./d.c.) portable instruments for general testing are accurate to 0.5% of full scale.

"Better scale readability, the result of a more nearly uniform scale distribution, is provided in all a.c. ratings to permit more accurate readings over wider portions of the 5.5-in. scale," the company said. "The scale window is designed to admit light from three sides for high visibility.

"All instruments have two spring-mounted pivot bearings which virtually eliminate pivot blunting and cracked jewel bearings."

Further maintenance reduction is achieved by simple screw adjustment for full scale sensitivity of ammeters and voltmeters.

Errors caused by stray magnetic fields are minimized in all instruments by means of improved magnetic shielding, G-E stated.

The new instruments weigh 5 lbs. net and dimensions are  $7\frac{1}{4}$  by  $7\frac{1}{4}$  by  $3\frac{1}{4}$  in.

## Hercules Announces Tin-Antimony Solder Paste

KEY NO. F-831

NEW YORK CITY—Hercules Chemical Co. here announces the production of "SWIF 95," a new 95/5 tin-antimony solder combined with active flux in paste form.

This new product complements Hercules SWIF Solder, the 50/50 tin-lead solder with flux in paste form.

"SWIF 95 is recommended for work which requires higher temperatures and pressures than and directions for use.

regular solder can handle," the company said. "It should be used for sweat connections on lines carrying temperatures up to 250° F., for pressures up to 500 lbs., and for saturated steam up to 80 lbs. Thus, it is adaptable for many heating, refrigeration, and air conditioning applications."

The new 95/5 solder is available in 4-oz.,  $\frac{1}{2}$ -lb., 1-lb., and 3-lb. containers, each with a free brush

## Information Center

For more information on What's New products, current literature and catalogs available, equipment advertised in AIR CONDITIONING & REFRIGERATION NEWS use Key Numbers where designated or specify products advertised and we'll see that you receive this information promptly.

### Products Advertised

(list name, page, and issue date)

### What's New or Current Literature Available

Key No. . . . .	Key No. . . . .
Key No. . . . .	Key No. . . . .
Key No. . . . .	Key No. . . . .
Key No. . . . .	Key No. . . . .
Key No. . . . .	Key No. . . . .

Name . . . . . Title . . . . .

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Company . . . . .

Street . . . . .

City . . . . . Zone . . . . . State . . . . .

Type of Business . . . . .

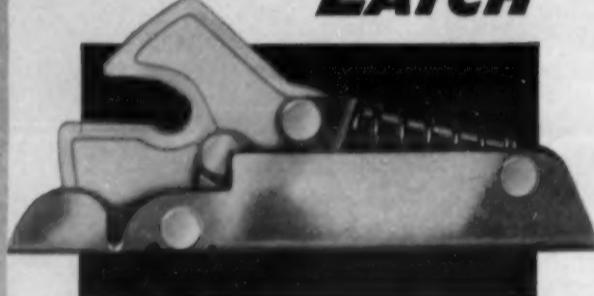
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DETROIT 26, MICHIGAN

## NATIONAL LOCK introduces the exclusive new

## SAFETY LATCH



## for refrigerators

- SAFETY-LATCH IS RELEASED BY PUSH ON INSIDE OF DOOR... OR PULL ON OUTSIDE OF DOOR
- USED WITH INOPERATIVE DOOR HANDLE AND ROLLER-TYPE STRIKE
- NO HANDLE ACTUATING DEVICE NECESSARY
- CLOSING DOOR RELOADS LATCH REGARDLESS OF POSITION OF BOLT
- ASSURES POSITIVE LATCHING ACTION FOR REFRIGERATOR DOORS
- MOUNTED VERTICALLY OR HORIZONTALLY ON RIGHT OR LEFT HAND DOORS
- NO LINKAGE PROBLEM... PROVIDES NEW FREEDOM IN HANDLE STYLING
- SMALL, COMPACT, LOW IN PRICE TOOLED AND READY FOR SHIPMENT

Write for sample and technical data on the outstanding new SAFETY-LATCH Series 59-844. National Lock engineers will work with you in creating all types of quality appliance hardware.

**NATIONAL LOCK COMPANY**  
ROCKFORD, ILLINOIS  
REFRIGERATOR HARDWARE DIVISION



## Background Music Flows Through Duct System

KEY NO. F-835

CLEVELAND—A new central entertainment system that feeds sound from a record player, television, or radio set into the warm air heating system was recently announced by Alsto Co. here.

Called "Registered Music," the system provides background music for every room in the house, it was noted. Installation consists of running a wire from the location of the music-emitting unit to a specially developed electronic speaker attached to the plenum chamber of any warm air heating system or air conditioning ducts.

The heat-resistant, vibration-free speaker "broadcasts" sound through the building.

Speakers are 6 by 9 in. featuring a permanent magnet and aluminum voice coil, a potentiometer built into the volume control, a vibrationless heavy-gauge steel case for mounting, and 20 ft. of UL approved wire.

## Preway Offers Built-In Refrigerator-Freezer

KEY NO. F-836

WISCONSIN RAPIDS, Wis.—Preway Inc. recently introduced a new built-in refrigerator-freezer, it was announced.

Of one-piece construction which needs no braces or supports, the unit has a supporting frame said to assure proper height and ventilation space.

A shell-type condenser is claimed to eliminate condensation and dripping water in the installation. Another feature is the two-control system which allows the refrigerator to be shut off while the freezer operates.

Antique copper and stainless steel models are available. The self-defrosting food compartment has a shelf area of 14 sq. ft. and the "Zero" freezing compartment has 156-lb. frozen food capacity.



The purchase price of any product is often misleading, for it precludes the cost of long-run operation. All Larkin products are engineered for the lowest possible operating costs, yet they are priced right. That's why Larkin leads the field for long-run, low-cost operation.

Manufacturers of the original Cross-Fin Coil • Humi-Temp Units • Frost-O-Trol Hot Gas Defroster • Air Cooled and Evaporative Condensers • Cooling Towers • Air Conditioning Units and Coils • Direct Expansion Water Coolers • Heat Exchangers



## Water Recirculation Pumps Introduced

KEY NO. F-837

LAWRENCE, Kan.—A new line of pumps for recirculation of water in refrigeration equipment was announced recently by Tech-Tron Corp. here.

Called the "Midwest D" series, the line is available in  $\frac{1}{8}$ ,  $\frac{1}{4}$ , and  $\frac{1}{2}$ -hp. sizes. The pumps can also be used for recirculating water to cooling systems, and for condensate disposal tanks and lines.

All types of motor windings are available and pumping assemblies may be either grey iron or bronze.

Pumps can be supplied for vertical immersion, vertical with side flange mounting to reservoir or tank, horizontal close coupled, and vertical close coupled with side flange mounting.

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### Home Air Conditioner Freezes Ice Rink In Promotion Stunt by Arizona Dealer

YUMA, Ariz.—Bob Perrine, local Carrier dealer, has successfully used a Carrier home air conditioner to freeze an ice skating rink for the Yuma County State Fair.

Equipping a regular 5-hp. air-cooled "Home Weathermaker," with special controls and tubing, Perrine's crew froze an area 10 by 18 ft. with a 3-in. layer of ice.

The Carrier dealer decided on his unique skating rink as a means of dramatizing the cooling qualities of his Weathermaker home air conditioning line.

To add a professional touch, colored lights were placed in large Mason jars, installed with "winkers," and then frozen under the ice.

Its debut before goggle-eyed natives, set off a chain reaction hunt for ice skates. Three local radio stations put out calls for skates. Before long, Yuma's only skating pond filled with eager youngsters taking spills and

gingerly testing the first ice they'd ever skated on.

In building his own Weathermaker-created skating pond Perrine solved formidable problems. Special copper pipe had to be made up in three sections at his shop. Booth space at the Fair was readied by laying a 4 by 4-in. framing to form the outlines of the rink.

A waterproof tank was formed of building paper spread over the edges and across the bottom, with seams coated to prevent leaks. Pipe sections were laid, cooling coils set in place and connected to the unit.

Freezing time for 240 gals. of water took 20 hours in the 95° desert heat.

To maintain the rink in lightning fast condition, hot water was poured over the ice each night to melt down rough spots and to make the surface freeze harder and clearer. Perrine's crew speeded freezing time by laying a cardboard cover over the ice.



A SOUND-SLIDE film on the application of "Armaflex," new flexible plastic pipe covering, is now being made available, it has been announced.

### Film Available on New Pipe Insulation

LANCASTER, Pa.—An 11-minute sound-slide film about a pipe insulation that is said to save up to 50% in installation time has recently been released by the Insulation Div. of the Armstrong Cork Co.

The film is a discussion of "Armaflex," a new, flexible, foamed plastic pipe covering. Designed originally for residential air conditioning and dual-temperatures lines, the new insulation has been found to be practical in preventing condensation on any residential-commercial copper tubing or iron pipe operating in a temperature range of 32-200° F., it was explained.

Because of its flexibility, Armstrong says Armaflex can be applied to new or existing pipes with a minimum of fitting cover fabrication and only one sundry material. The film states that application is so simple, no special tools or skills are required.

Interested groups may contact any Armstrong district office, or the company's Insulation Div., Lancaster, Pa., to arrange for a showing.

### Westinghouse Names Tennessee Outlet

STAUNTON, Va.—The Air Conditioning Div. of the Westinghouse Electric Corp. announces its appointment of Tennessee Engineering Co. of Chattanooga, Tenn. as distributor for its entire packaged product line including heat pumps and "Precipitron" electronic air cleaners.

Headed by Gene Lennon, president-owner, the Tennessee Engineering Co. serves parts of Tennessee, north Georgia, and Alabama.

### WHAT . . WHEN . . WHERE

#### — A Guide to Coming Events of Interest

Refrigeration Service Engineers Society (RSES)

Educational Forum, Sept. 21-23, Bradford hotel, Boston.

National Electrical Contractors Association (NECA)

Annual Convention and Exposition

Sept. 23-29, Sheraton-Palace hotel, San Francisco.

Air-Conditioning & Refrigeration Institute (ARI)

Product Section Meetings, Oct. 24-26, New Orleans.

Air-Conditioning & Refrigeration Wholesalers (ARW)

Annual Meeting, Oct. 24-27, Jung hotel, New Orleans.

National Association of Practical Refrigerating Engineers, Inc.

(NAPRE) Annual Convention

Oct. 29-Nov. 2, Statler hotel, Detroit.

Dairy Industries Exposition (DISA)

Oct. 29-Nov. 3, Atlantic City.

National Hotel Exposition

Nov. 12-16, Coliseum, New York City.

National Electrical Manufacturers Association (NEMA)

Nov. 12-16, Traymore hotel, Atlantic City.

Refrigeration Service Engineers Society (RSES)

Annual Meeting

Nov. 15-18, Hotel Muehlbach, Kansas City, Mo.

American Society of Refrigerating Engineers (ASRE)

Semi-Annual Meeting

Nov. 25-28, Hotel Statler, Boston.

Refrigeration & Air Conditioning Contractors Association (RACCA) Annual Meeting

Nov. 26-28, Balmoral hotel, Miami Beach, Fla.

National Warm Air Heating & Air Conditioning Association (NWAHACA) Annual Convention

Nov. 27-30, Netherland Plaza hotel, Cincinnati.

### Tuttle & Bailey Stocks Now In Philadelphia

### Sharkey in Airtemp West Coast Post

DAYTON—F. J. Laughna, director of regional operations for the Airtemp Div., Chrysler Corp., has announced that George Sharkey has been named Airtemp west coast assistant regional manager.

Sharkey, prior to his present appointment, was district manager. He succeeds L. D. Brosell who recently resigned.

Sharkey has been associated with Airtemp and the company's west coast sales activities since 1950.



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### INTERNATIONAL AIR CONDITIONER COVERS

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32 STYLES  
TO FIT EVERY  
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Wherever an air conditioner stands out, there is an opportunity for you to sell a cover. Profit with the FIRST, THE FINEST . . . INTERNATIONAL COVERS . . . ALL AT ONE LOW PRICE. Made of long lasting, heavier gauge Firestone Velon. Write for the facts today!

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### SAVE WITH "In-Between" SIZES

Instead of just 5 Magnetic Starters in the 1 to 100 hp range, Furnas Electric offers you 9 sizes—the 5 standard sizes plus 4 "in-between" sizes. The many "in-between" sizes in the Furnas Electric line allow you to choose the control that is best suited for your particular job—at a saving to you in cost, space and capacity.

Write today for Bulletin 5411—1111 McKee Street, Batavia, Illinois

A9

**FURNAS ELECTRIC COMPANY**  
BATAVIA, ILLINOIS  
SALES REPRESENTATIVES IN ALL PRINCIPAL CITIES

For more information about products advertised on this page use Information Center, page 22.

## Servicing Weathertron Heat Pumps (7)

Originally just a theory and for many years subject only to occasional experimental installations, the heat pump of late has developed into a practical and expanding business.

It's future was never brighter.

Design, manufacturing, sale, installation, and service of the heat pump have already become important factors in the air conditioning industry, and are bound to grow.

In recognition of the present stage of development, and the expected future, the News is presenting herewith a series of articles on servicing a specific make of heat pump—the General Electric air-to-air "Weathertron."

This instalment continues the discussion of Test and Adjustment.

### Temperature Switches

Three temperature switches are located in the upper right hand corner of the outdoor air compartment. The temperature sensing elements are mounted on the downstream side of the outdoor coil. Therefore, they are subjected to temperatures which, while the Weathertron is on the heating cycle, are lower than outdoor temperatures.

### Outdoor Thermostats

The closing of the outdoor thermostats contacts allow the second stage of the Weathertron thermostat to control the usage of supplementary heat.

Outdoor thermostat I (ODT I) contacts are set to close when the outdoor *discharge* air temperature decreases to 30.5° F. and will open when the temperature rises to 33.5° F. (about 43° F. outdoor air temperature).

The closing of the outdoor thermostat II (ODT II) contacts is 10.5° F. and the opening is 13.5° F. (about 20° F. outdoor air temperature).

To check setting take temperature readings in *discharge* duct. Readings will be approximately 8° to 10° F. lower than outdoor air temperature.

### Third Cylinder Cutout Switch

Utilization of the third cylinder of the compressor is controlled by the third cylinder cutout (TCCO). This is a temperature actuated control whose contacts close when the outdoor *discharge* air drops below 18.5° F.

(Note: Outdoor air temperature will usually be somewhat higher, approximately 8° to 10° F.) With these contacts closed, the third cylinder solenoid will be energized and the third cylinder will be pumping. The contacts reopen, and thereby stop pumping action in the third cylinder, when the outdoor *discharge* air rises to 21.5° F.

### Solenoid Valves

#### Switchover Valve Solenoid

A three-way solenoid valve (SC) is used to operate the switchover valve (Fig. 10). When this pilot solenoid valve is energized, head pressure is exposed to the switchover valve



FIG. 10—Override solenoid showing switchover valve solenoid.

#### Override Solenoid

The override solenoid valve (OR) controls the flow of refrigerant through the override capillary tube (Fig. 10). It is located in the refrigerant line between the dryer and the accumulator and is in the open position during the heating cycle and normally on the cooling cycle. The override control switch (ORCS) controls the action of the override solenoid valve. For details of operation see ORCS under pressure switches of this section.

#### Third Cylinder Loading Solenoid

The third cylinder loading solenoid valve (TCL) is a three-way valve which exposes either head or suction pressure to the third cylinder loading mechanism which is internal to the compressor. It is located directly below the switchover valve solenoid. This valve is controlled by the third cylinder cutout switch (TCCO). For details see TCCO under pressure switches.

(To Be Continued)

## 'Complete' 2-Hp. Home Packaged Units Pushed By Department Store

KANSAS CITY—Major department stores of the country have been in the business of selling room or window air conditioners for several years. Now one department store, JONES—Kansas City's largest—has launched a more ambitious air conditioning sales venture.

JONES has been franchised as a retail outlet for the low-cost "complete" home air conditioning system introduced recently by Airtemp Div. of Chrysler Corp.

The system is sold as a unit, at a single price. It includes a 2-hp. "packaged" air-cooled air condenser, air ducts, registers, and thermostat.

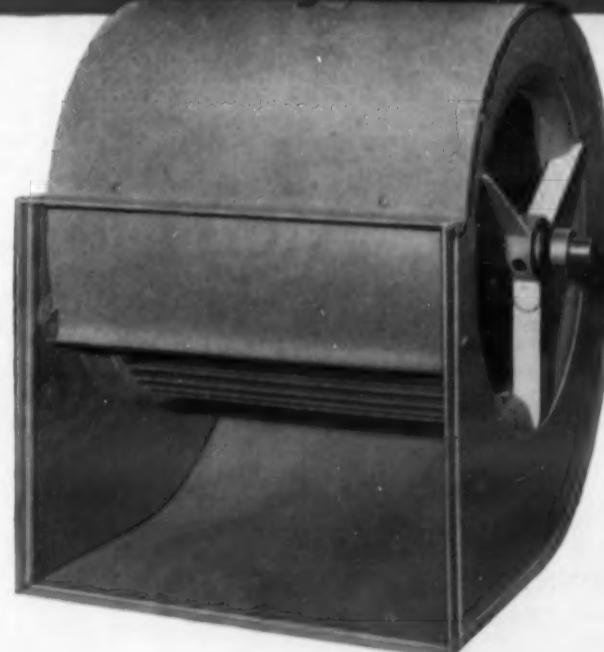
"The air conditioning industry is watching this," Airtemp said.

## BIGGEST NEWS in the Air-Moving Industry!

**LAU SAVES YOU MONEY!**

**new Lau "Budget • Blower" is a triumph of economy with quality**

With no sacrifice of quality or flexibility, you get the lowest blower price ever with the Lau "Budget • Blower" . . . this, in the face of rising steel costs! Choice of sleeve bearings, ball bearings or famous Lau-Pak Gold Seal bearings . . . Lau scroll sides pre-punched to permit mounting at multiple angles of discharge . . . economies of adaptability, palletized shipping, bulk packaging of hardware . . . quick shipment from stock . . . tangible benefits of 25 years of experience and engineering know-how . . . all at an unheard-of low price with the Lau "Budget • Blower."



Phone . . . Wire . . . Write . . . or See Your Lau Representative Today!

## PARTS ORDERS for UNIVERSAL

- AIR CONDITIONERS
- REFRIGERATORS • FREEZERS and
- BEVERAGE COOLERS

including Alisco; Ambassador; Armaid; Artkraft; Cooleraire; Majestic; Philharmonic; Supremacy; U. S. Capitolaire. Should now be sent to:

UNIVERSAL DIVISION  
THE HORTON COMPANY  
915 Liberty Ave., Pittsburgh 22, Pa.



## THE LAU BLOWER COMPANY

2000 Home Avenue • Dayton 7, Ohio

Other plants in Kitchener, Ont., Canada and Azusa, California

# Distributor Tells How He Got Dealers To Sell Heat Pump--Right Now

300-Unit Order Climaxes Two Years'

Intensive Field Training, Promotion

NASHVILLE, Tenn. — Suppose you were given the responsibility of setting up an organization to distribute a heat pump over some 50 counties. How would you go about it? And how would you develop that territory into a major sales producer in less than two years?

Bruce McLain, general manager of Radio & Appliance Corp., "Weathertron" distributorship got that assignment.

This last June, less than two years after taking over the comparatively undeveloped territory, his organization signed a contract with a Chattanooga builder for a record installation of 300 Weathertrons in his new All-Electric subdivision.

#### Explains Operation

How did he do it? McLain tells the story:

"J. R. Andrews, founder and president of Radio & Appliance, established a new company division, the Air Conditioning Div., to market the Weathertron and appointed me general manager of the new operation. A sales

organization was then formed along with supporting services departments.

"Our first problem was to study our marketing area analytically and determine the best way to serve it.

"After considerable study of the territory on a county-by-county basis, weighing such factors as geographic characteristics, population, buying power index, climate, and existing heating and air conditioning industry sales reports, sales districts were established — namely; Nashville, Middle Tennessee, Chattanooga, and Knoxville—Upper East Tennessee.

"District sales managers were appointed with responsibility for all activities carried on in their respective districts.

"It was immediately recognized that physical distribution for all areas could not be handled from the Nashville warehouses. There are some areas served in Virginia for example, which are some 400 miles from the home office.

"Branch warehouses were



EVERY FIFTH SATURDAY, district managers for Radio & Appliance Corp., Nashville Weathertron distributor, gather in the home office to discuss their territorial development projects. J. M. Hand, General Electric Weathertron representative (l.), listens and offers advice.

therefore established in Chattanooga and Knoxville for warehousing of equipment and replacement sealed cycles.

"Placement of stock in Chattanooga and Knoxville as well as in our main warehouses in Nashville has resulted in direct handling and shipping savings running into the thousands of dollars.

"It also answered satisfactorily the primary reason for the move — people in those areas are assured immediate shipment and pickup availability of equipment and parts and are given a sense of being served *locally*, which is most important.

"A general annual operating budget was set up based upon full attainment of sales objectives agreed upon as a part of franchise obligations. Sales objectives were then distributed among our sales districts on a county-by-county basis in proportion with the potentials.

"The county-by-county sales objectives then became the primary guides for all future sales planning—dealer development, advertising, promotion, 'buying influences' development.

"Having established our basic organization and our sales objectives, we were faced with the big question 'What do we do now?'

#### Programs Organization, Consumer Demand

"Before going too far we came to the rather obvious conclusion that our operation by definition would depend upon the success of our dealer organization and the demand for our product.

"We therefore set out on a two-point program which has become our merchandising plan:

"1. Develop the best dealer organization throughout the entire distribution area.

"2. Create consumer demand for and acceptance of the Weathertron heat pump second to no other air conditioning product through the most intensive and extensive advertising and sales promotion program possible.

"In attempting to develop the best dealer organization throughout our entire distribution area,

we have made each district sales manager basically responsible for dealer development in his own area.

"It is his responsibility to survey each of his towns, locate the best dealer prospects, and follow through in franchising and giving on-the-spot training.

"In this activity, as in others, the district sales manager has made available direct assistance from the General Electric Co. area sales representative.

"Before a final decision is made regarding a dealer franchise the situation is discussed and pros and cons weighed between our district manager and our home office.

#### Manager Calls on Dealers Every 2 Weeks

"Each sales district is designed so that the district manager can call on each of his dealer accounts at least once every two weeks.

"We feel that proper distributor-dealer relationship cannot be maintained any less frequently.

"Although our district manager is basically responsible for dealer development and training in his area, he is not expected to proceed on this important task unassisted. Every February we hold our annual dealer sales meetings in Nashville and Knoxville. These meetings include an

all-day business session followed by a banquet in the evening.

"In addition to the annual sales meeting, a product application and service school is conducted normally in the spring and fall in Nashville, Chattanooga, and Knoxville to train dealer sales and service personnel in the latest application and service techniques.

"Sales training meetings are also held during the evenings with small dealer groups to train new salesmen, refresh old ones, and to discuss new retail sales information.

"Application and design assistance to dealers is made available in Nashville on difficult or unusual jobs. Application and service assistance is available to a dealer in his own place of business from our Nashville office when required.

"We have an all-day sales meeting for all our district managers and office sales personnel every fifth Saturday in Nashville for the purpose of reviewing past performance, discussing future objectives and promotions, comparing problems, and conducting a continuing personal development training program.

"A specific territorial development project is assigned each district manager at each sales

(Concluded on next page)

## New RUBATEX CLOSED CELLULAR RUBBER TUBING STOPS COLD LINE CONDENSATION EASIER, QUICKER, Surer!



Here's the newest tubing insulation specially developed by Rubatex (pioneer manufacturer of closed cellular rubber) to positively stop condensation on copper formed cold lines.

It is a "slip-on" tubing with a nitrogen-filled closed cellular structure which cannot absorb moisture even at cut edges. Extremely flexible — readily slips on cold carriers — bends without cutting or fitting — fits snugly to any contour of pipes. For

application on installed pipes, can be slit lengthwise, snapped around piping and sealed with special adhesive.

Fire-safe, Rubatex Tubing has good thermal insulation properties — a low K-factor of .28 at 75°F which remains constant as Rubatex will not deteriorate in service.

Manufactured with minimum inside diameter of  $\frac{3}{8}$ ". Produced in any lengths up to 250 feet.

For full details and sample of Rubatex Closed Cellular Tubing — print your name in space at right, attach to your company letterhead and mail today to:

RUBATEX DIVISION, Great American Industries, Inc.  
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## STA-RITE AIR-CONDITIONING PUMP

You'll go a long way—installing condensers, towers, chillers—when you hook up with new Sta-Rite Type AC pumps. It's easier to make money on these pumps. Prices are right in line with the lowest. Installation costs are less because these pumps are small, easy-to-handle—easy to "fit-in." Size for size, you can't find a pump that's better made. For instance, capacitor, ball bearing motors are full power—specially designed for these pumps. 12 models, 145 GPM. Heads to 170 feet.

Much higher capacity with tandem installations.

Ask your wholesaler. And write for copy of new bulletin describing Sta-Rite Air-Conditioning Pumps.

STA-RITE PRODUCTS, INC.

704 S. Eighth Street, Delavan, Wisconsin

Los Angeles, Calif. • Chamblee, Ga.

In Canada: STA-RITE Pumps (Canada) Ltd., Ajax, Ontario





FULLY INFORMED builder salesmen give visitors the story on Weathertron unit installed in model home.

## Distributor's Heat Pump Sales--

(Concluded from preceding page)  
meeting to be reported on at the next meeting.

"It has been found that having company sales meetings at five-week intervals is frequent enough to maintain unity of purpose but not so frequent as to tax too heavily selling time.

"Sales objectives are established for each district manager on a monthly basis and standings are published monthly.

### Remuneration Set on Percentage Basis

"Sales remuneration is on an incentive basis and a special bonus is earned if a district manager realizes 100% of his annual sales objective.

"In attempting to create consumer demand for Weathertron second to no other air conditioning product, we have adopted every applicable medium of advertising and sales promotion.

"A regular newspaper advertising schedule has been set up for all dealers. These advertisements tie-in where possible with a national advertising program.

"The dealer newspaper advertising program is supplemented by distributor advertising in key cities every three or four months in the form of full-page color advertisements.

"We have found color a most successful means of strengthening our ads. We have reprints made of these color advertisements and use them as mail-outs and hand-outs.

"Our newspaper ads and other elements of our advertising are designed and coordinated by an advertising agency.

"We maintain an addressograph system for regular mailings in the form of product information and newsletters to dealers, utility personnel, builders, and architects.

### Jointly Sponsor TV 'Million Dollar Movie'

"We have assumed joint sponsorship of the "Million Dollar Movie," a local television program presented each evening seven days a week. This time is relatively inexpensive and reaches a good viewing audience. During peak seasons we sponsor local TV weather shows.

"We insist that every dealer have an attractive Weathertron display in his showroom as a means of encouraging interest and sales. We also have placed Weathertron displays on numerous utility display floors.

"We are a great believer in on-the-job signs to identify our installations in progress and to

advertise at no cost the fact that we are actually making installations throughout the area.

"In March of this year we undertook an extensive outdoor advertising program which was coordinated by our agency.

"We set up a four-month saturation program with 150 billboard posters in every town in our area. The poster designs were made locally and the design was changed each month. This program has proven most successful in improving consumer acceptance.

"Radio advertising has been found most effective by some dealers in small localities where the cost of radio time is low and where only one major station exists. Radio has also been used quite effectively during our model home promotion.

"An All-Electric General Electric Weathertron Dream House open house promotion was held in Nashville during May, 1956.

"Newspaper, direct mail, television, billboards, special signs, window posters, and hand-outs were all utilized in making this promotion what we feel has been the most successful in terms of interest and attendance yet held in our area.

"This open house promotion was so successful in advertising the Weathertron that we are proceeding with a model home program among all dealers whereby an advertising and promotion program is being tailored for each dealer's local situation and all 48 Weathertron dealers are being encouraged to promote at least one model home before the end of the year.

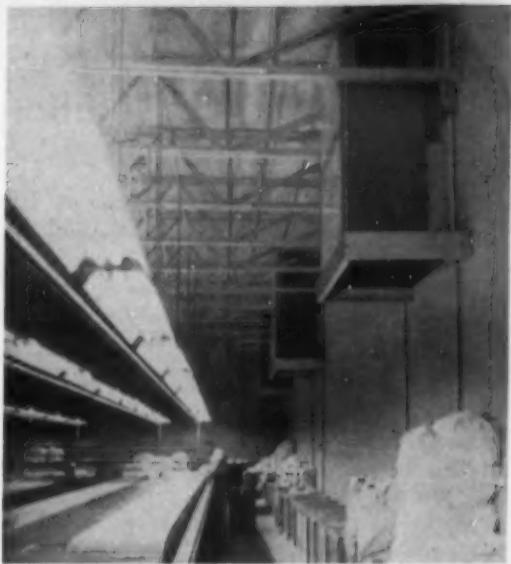
"Our open house promotion in Nashville proved instrumental in closing contracts with several builders for the use of Weathertrons in their projects, including the Chattanooga builder who has contracted to build a 300-home Weathertron subdivision.

### 8 Units Heat, Cool 10 Shopping Center Shops

"We have been fortunate in closing a number of interesting jobs including an entire Weathertron shopping center in Lebanon, Tenn.; the East Tennessee undergarment factory in Elizabethton; Sterchi's Department Store in Chattanooga; a number of churches, offices, clinics, utility buildings, etc.

"At the Cedars of Lebanon shopping center where 10 shops

SUSPENDED 10 ft. above floor, 13 Weathertron units cool and heat East Tennessee undergarment factory at Elizabethton. No floor space was available for them.



are completely heated and cooled, eight Weathertrons are used.

Our application engineer Warren A. Oster designed and engineered the application. Donald Cowan, Nashville architect, designed the center while White Appliances and Heating Co. of Nashville made the installation.

"At the East Tennessee undergarment factory at Elizabethton, 13 units are all supported on platforms about 10 ft. above the floor, allowing complete use of the floor space.

"Some of the units are free-discharge, while others have ductwork with ceiling type diffusers. Small fresh air ducts are connected to the return.

"Since the units are completely automatic, it is possible to cool in one area and heat in another area simultaneously, if necessary. It will also be possible to switch rapidly from heating to cooling and back again in spring and fall without all the procedure accompanying the start-up and shut-down of central heating and cooling systems. Oatman Electric Service of Elizabethton was the dealer involved.

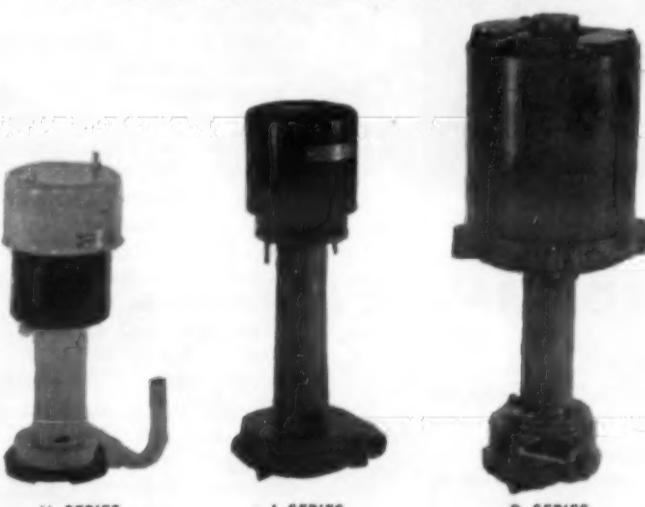
"We are presently designing a complete hospital system utilizing Weathertrons throughout."

"This article is to be reprinted. To place your order, use Information Center coupon."

## WANTED: AIR CONDITIONING DISTRICT MANAGERS

Typhoon Air Conditioning Co., Division of Hupp Corporation, has openings for air conditioning sales engineers who have had retail or wholesale experience in selling 2 to 40 ton commercial and residential air conditioning. Attractive base salary plus commission arrangement. This is a real opportunity for any man who wants to increase his earning power with the fastest growing company in the air conditioning field—now engaged in an expanding cooling and heating program. Write, phone or wire MARK MOONEY, VICE PRESIDENT, TYPHOON AIR CONDITIONING CO., 505 Carroll Street, Brooklyn 15, N. Y.

## CALL ON MIDWEST FOR YOUR JOB RATED PUMP UP TO 65 GPM AND 45 FOOT HEAD



In the MIDWEST line you will find a complete line of centrifugal pumps for use in refrigeration systems, beverage coolers, ice cube machines, condensate disposal tanks and general circulation uses. 140 models from 1/125 to 1/2 HP in submerged, side flange mounted and close coupled design. Ask our engineering department to recommend the proper MIDWEST pump for your application.

TECH-TRON CORPORATION  
LAWRENCE, KANSAS

For more information about products advertised on this page use Information Center, page 22.

**ACME**  
INDUSTRIES, INC.  
JACKSON, MICHIGAN  
manufacturers of  
QUALITY  
air conditioning  
and refrigeration  
equipment since 1919



### NEW ACME FLOW-MIZER® evaporative condensers

Bare all-prime surface coils (copper or steel) and blower-induced, constant velocity air flow give you more condensing capacity for every dollar invested in Acme's '56 Flow-Mizer Evaporative Condensers. Hot-dip galvanizing after fabrication, convenient external sump and new full-width access panels are among 16 outstanding features.

Phone or write Acme for details

## Refrigeration Problems And Their Solution

By Paul Reed  
For Service and Installation Engineers



### Low Evaporator Temperature

The recent series in this column on the "Comparison of Refrigerants 12 and 22" was quite lengthy, but judging from several letters that have been received, there are a few points that need further elaboration. Our readers may be interested in some of the comments and questions in these letters.

The following paragraphs were extracted, almost verbatim, from letters from two large

supermarket chains. Since they bear on such closely related subjects, we will, in the interest of brevity, discuss them together.

"We have just read the sixth of your articles on the 'Comparison of Refrigerants 12 and 22,' and we want you to know how much we appreciate the frank and factual approach you have taken on this subject. We hope that AIR CONDITIONING & REFRIGERATION NEWS will continue to publish your articles on timely service subjects.

"For some time we have felt that there might be advantages

to the use of 22 in all low temperature cases, particularly ice cream cases, for the unit could be operated at a positive suction pressure; however, we find that even with 22, it is necessary to operate as low as 7 and 8 in. of vacuum in some fixtures, in order to maintain satisfactory ice cream temperatures. Since we must operate on a vacuum, with either 22 or 12, why use 22?

"Moreover, we have been quite skeptical about the high condensing pressures with 22, and in view of its discharge temperatures, particularly with air-cooled machines, as shown in Table 11 in the July 2 issue, we are even more doubtful about using low temperature equipment charged with 22."

#### ANSWER.

We very much appreciate your kind words, and hope that

the information in this series of

articles has been helpful to you and other readers. Our purpose in preparing this series was to gather in one article a digest of the available data on 12 and 22 taken from literature on the subject, personal contact with men in laboratories, factories, and field service, and the author's own experience.

We have tried to be as impartial and fair as possible. We have no desire to influence anyone either for or against the use of either 12 or 22, nor of equipment employing either of these refrigerants.

There are two or three points in your letter on which we would like to comment. One is the matter of suction pressures. You mention a suction pressure of as low as 7 or 8 in. of vacuum with 22 on open-type low temperature cases. These seem much too low.

Presumably, the ice cream is being kept at about -12° to -10°.

You should be able to do this with a discharge air temperature from the coil of about -25°, thus giving a temperature difference of about 15°. For these conditions, the evaporator temperature should be about -30°, possibly as low as -35°, and the evaporator pressure about 2½ to 5 p.s.i.g. for 22.

Suction pressures of 7 to 8 in. of vacuum correspond to a saturation temperature for 22 of about -52°, although you should be able to maintain the required temperatures with an evaporator temperature of -30° to -35° corresponding to an evaporator pressure of 2½ to 5 p.s.i.g.

There are five main reasons for the excessively low evaporator temperature:

1. Evaporator too small. This is possible, but not very likely with the better makes of equipment.

2. Condensing unit has a great deal more capacity than the load, that is, out of balance. This should not be difficult to check.

3. Evaporator not fully active, due to expansion valve not properly adjusted, sticky operation, partial blockage in the liquid line, low refrigerant charge, etc.

4. Not enough air circulation. This is a distinct possibility, but again it should be easy to check. It could be due to iced coil, blockage in the air passages, fan motors running too slow (perhaps low voltage), etc.

5. Pressure drop in the suction line. This is a very common condition on low temperature equipment, but often overlooked. Moreover, suction lines of 100 ft. or over are quite common on supermarket equipment.

It is the author's belief that for 22 evaporator temperatures of -20° or below, the pressure drop in the suction line should be held to less than 1 p.s.i., from the outlet of the evaporator to the suction service valve on the compressor, but in any event not over 1½ p.s.i.

In contrast to this, the author has seen suction pressure drop on low temperature equipment in the field running as much as 8 to 10 p.s.i.

In your case, the suction pressure is running 6 to 9 p.s.i. less than the evaporator pressure corresponding to a temperature of -30° to -35°. If we allow 1 p.s.i. pressure drop, your suction pressure is still 5 to 8 p.s.i. lower than it should be.

The two most common causes of excessive pressure drop are:

Suction lines too small. See tables provided by the equipment manufacturer, or in Section 66 of the RSES Service Manual, or Chapter 9 of the ASRE Data Book.

Too many fittings. This can often be relieved by using long sweep elbows.

It might be well to drill a small hole in the suction line where it leaves the evaporator coil, and solder in a fitting. Attach a compound gauge and check its reading against the one on the suction service valve. There should be less than 1 lb. difference in their readings, even for a 100-ft. suction line.

Be sure that the gauges are matched; that is, they read the same when open to the atmosphere.

(To Be Continued)



### Welcome News!

### Easy-to-apply KWIKWRAP Tape from "VIRGINIA"

Yes, both old and new friends of "Virginia's" Presstite Insulation Tape will welcome the new Kwikwrap Tape, packaged in 30-in. flat strips for an easier, quicker, neater way of covering cold pipes to prevent condensation and stop dripping. Hot pipes up to 200°F. can be insulated, too. Kwikwrap is especially handy when space around the pipe or tubing is too limited to permit

passage of a regular roll of tape. Kwikwrap is applied horizontally (see photograph above).

Kwikwrap is supplied in six widths, each designed to exactly cover a specific tube or pipe size— $\frac{1}{2}$  to  $1\frac{1}{2}$  inches OD. Strips are applied so that the end of one joins to the end of the one before it; they will self-seal when pressed together.

#### HOW KWIKWRAP TAPE IS PACKAGED

Width for $\frac{1}{2}$ in. OD	Width for $\frac{3}{4}$ in. OD	Carton of 24 30-in. x $\frac{1}{4}$ -in. strips—sufficient for covering 60 lin. ft.
Width for $\frac{5}{8}$ in. OD	Width for $1\frac{1}{8}$ in. OD	Carton of 18 30-in. x $\frac{1}{4}$ -in. strips—sufficient for covering 45 lin. ft.
Width for $1\frac{1}{4}$ in. OD		Ask your wholesaler—or write us today for full details
Width for $1\frac{1}{2}$ in. OD		

Refrigeration Division  
VIRGINIA SMELTING COMPANY

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ESOTOO • KINETIC CHEMICAL'S "FREON" REFRIGERANTS  
V-METH-L • CAR-O-GAS • PERMAGUM • PRESSTITE TAPE • KWIKWRAP  
SUNISO REFRIGERATION OILS • WATER TREATMENT CHEMICALS  
Available in Canada and many other countries

## Common Numbering--

(Concluded from Page 1, Col. 4) been accepted by the Standards Committee and Council of The American Society of Refrigerating Engineers and will be incorporated into an ASRE Standard on Refrigerant Designation for approval by the general membership of the scientific group in the near future.

Specifically, Du Pont has announced that it will not look upon use by the refrigerants industry of the generic term "refrigerant" followed by code numbers based on Du Pont's numbering system to constitute infringement of its trade-marks.

Such trademarks consist of a combination of "Freon" or the letter "F" with such numbers as in the case of "Freon-11," "F-11," "Freon-22," "F-22," etc.

However, the announcement made it clear that Du Pont reserves to itself the exclusive use of its trademarks.

The numbering system, based upon the chemical structure of compounds used as refrigerants, was first developed by "Kinetic" Chemicals, Inc., then a jointly owned subsidiary of Du Pont and General Motors Corp., in 1930.

The first of a family of "Freon" fluorinated or halogenated hydrocarbon compounds had just been introduced.

From 1930 until 1952, "Kinetic" Chemicals, which became a division of Du Pont's Organic Chemicals Department in 1950, was the only U. S. manufacturer of fluorinated hydrocarbon refrigerants.

In the early 1950's the General Chemical Div. of Allied Chemical & Dye Corp. entered this field with "Genetron" fluorinated hydrocarbon products.

Pennsylvania Salt Mfg. Co. has announced it will introduce later this year a third brand of fluorinated hydrocarbon compounds under the trademark "Isotron."

In making this offer of its numbering system to The American Society of Refrigerating Engineers, R. J. Thompson, di-

rector of sales of the Du Pont Co.'s Kinetic Chemicals Div., observed that an ASRE task committee has been studying the problem of designation of refrigerants for the last several years in order to avoid the problems created for users and equipment manufacturers if refrigerant manufacturers adhered to or adopted different numbering systems.

Thompson expressed the hope that Du Pont's proposal would eliminate presently existing confusion and would be beneficial to the whole refrigeration industry.

## Manitowoc Appoints Brigance Sales Chief

MANITOWOC, Wis.—Manitowoc Equipment Works has appointed J. Carl Brigance national field sales manager on its line of Manitowoc 2-Zone combination refrigerator-freezers and upright and chest type freezers.

Brigance formerly held the position of manager of distribution for the company. In taking over his new duties he steps into the position formerly occupied by Ray G. Fredrickson who was recently appointed general sales manager of Manitowoc.

## Worthington 6-Mos. Net Reaches \$4,529,719

HARRISON, N. J.—Net income of Worthington Corp. and its domestic subsidiaries for the six months ended June 30, 1956, after provision of \$4,622,642 for Federal income taxes, amounted to \$4,529,719, equivalent to \$3.03 per share on the 1,437,639 shares outstanding.

For the corresponding period last year, net income, after provision for Federal income taxes, amounted to \$3,602,491, equivalent to \$2.61 per share on the 1,308,011 shares of common stock then outstanding.

## Hospital To Get Cooling

BATON ROUGE, La.—Airtrol Engineering Co. here has been awarded the contract for air conditioning Baton Rouge General hospital for \$244,167.

PAUL H. COOPER

## RISAC Request--

(Concluded from Page 1, Col. 5) pressure-relief devices for window model air conditioners up to and including 2 hp., pending the finalization of tests being made by the industry. The Chicago authorities are said to recognize that these studies and tests may extend into 1957.

Consulting Engineers E. P. Heckel and William Goodwin of Chicago are chairman of committees appointed to draft new codes covering ventilation and air conditioning for industrial and commercial applications respectively.

In Los Angeles, Ralph M. Westcott of Holladay and Westcott, consulting engineers, has been named by the Refrigeration Section of the Los Angeles Building and Safety Department to head a code advisory committee to review the present Los Angeles refrigeration code and make recommendations for suitable revisions.

George J. Fisher, Director of Service, city of Wichita, has advised that Edward Fahnestock has been named by City Council to act as chairman to coordinate efforts of all interested groups in preparation of an ordinance to create a board of air conditioning, refrigeration, and warm air heating examiners to examine applicants for and grant licenses to those who wish to engage in the businesses covered.

Under the proposal, a journeyman mechanics' license would

be issued without examination to a manufacturer's representative who supervises installation of special equipment upon satisfactory proof that he has a proper knowledge of such equipment and the code, it was explained.

## NLRB Frees Fedders From Trucking Row

MASPETH, L. I., N. Y.—Fedders-Quigan Corp. here was recently freed by the National Labor Relations Board from involvement in an effort by a local teamsters' union to organize a trucking firm serving the Fedders company.

On the basis of a settlement stipulation agreed to by all parties, the NLRB has ordered Local 522 of the International Brotherhood of Teamsters, Chauffeurs, Warehousemen, and Helpers of America, AFL-CIO, to stop attempting to induce employees of Fedders, its customers, and its suppliers to strike or to refuse to handle or work on goods going to and from Fedders Maspeth plant, it was added.

The object of such actions on the part of the union were in an attempt to force Fedders to cease doing business with Anthony Giusto Co., Inc., to force customers, suppliers, and other truckers to cease doing business with Fedders, and to force the Giusto firm to recognize or bargain with the teamsters' union local.

## RACCA Meeting--

(Concluded from Page 1, Col. 5) recently announced a plan to provide 24 booths for educational displays during the National RACCA Convention.

Armand Cowan, president of ACRA of Florida, states that all booth spaces are in direct connection with meeting rooms and that only qualified manufacturers will be invited to display their products.

Cowan further stated that, since there are limited numbers of spaces available, all applications will be screened so that a variety of equipment component parts, etc., will result.

## NCRSA Analysis--

(Concluded from Page 1, Col. 3) expense averaged 11.05%, down somewhat from 12.28% in 1954. Average total administrative expense rose to 6.21% from 5.63% in 1954.

Total occupancy expense remained at 2.24%; miscellaneous expenses average 1.43%, down from 1.54% the previous year. Taxes, not including Federal and state income taxes, rose to .74% from .50%. Net profit before income taxes was 2.80% compared with 4.08% in 1954.

Income taxes represented an average of 1.07% in 1955 compared with .74% in 1954. Net profit after tax dropped to .99% from 3.20% in 1954. Stock turnovers rose to 7.61 in 1955 from 7.19 the previous year.

**No. 1 industry favorite**

**PARAGON**  
**300-MB time switch is right for**  
**90% of all refrigeration defrosting jobs**

No. 1 favorite? You bet! From the day the Paragon 300-MB switch was introduced, it has been the standard of the refrigeration industry—and its uses are growing daily. It's standard for hot gas or electric heat defrosting... it automatically controls fans, solenoid valves, compressor motors and other equipment. Install it, set it, then forget it.

Insist on famous Paragon top-quality construction necessary for heavy-duty service—vital to ending call-backs—a must for guaranteeing profits. Order from your Refrigeration Equipment Wholesaler or write Dept. 1687 for bulletin.

✓ **PROVIDES DEFROST CYCLES** from 15 to 120 minutes—1 to 8 operations per day.

✓ **LONGER SWITCH LIFE** assured by heavy-duty, industrial type motor.

✓ **SHOCK-PROOF TERMINAL BLOCK** means faster, safer installation.

✓ **AMPLE CAPACITY**—30 amps, 120/240 volts, single or double pole. Offers flexibility not found in any other control.



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**WRITE TODAY FOR COMPLETE INFORMATION**

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**WALK-IN COOLERS BEVERAGE COOLERS DIRECT DRAWS CUBE MAKERS DRAINBOARDS**

**LA CROSSE**  
EXPORT OFFICE: 80 BROAD ST., NEW YORK, CABLE: EXIMPORT

For more information about products advertised on this page use Information Center, page 22.

## AIR CONDITIONING &amp; REFRIGERATION NEWS

## REPRINTS

The following articles have appeared recently in Air Conditioning & Refrigeration News, and are now available in reprint form. Supply of some reprints is limited. The order coupon below can also be used to obtain "selected" reprints not listed by giving title, page, and issue date.

## BOOKLET FORM

## 1) "AIR CONDITIONING THE HOME"

A comprehensive study on year 'round residential air conditioning—seven sections including, why people buy it, market conditions, how to sell it, estimating costs for various types of installation. FHA requirements, plus much more valuable information. 9" x 12" in size, finely printed and profusely illustrated.

Only \$1.00 each.

## 2) "COMMERCIAL PACKAGED AIR CONDITIONERS AT WORK"

70 pages, 9" x 12"—the first comprehensive book covering this important segment of the air conditioning industry. Includes market, survey information, commercial, institutional and industrial applications, and a complete explanation of the fast growing segment of the commercial market—packaged heat pumps.

Only \$1.00 each.

## 3) "SHORT, SHORT COURSE IN AIR CONDITIONING FUNDAMENTALS"

A brand new booklet just off the press dealing with air conditioning in basic, understandable terms. Five sections, including Air, Moisture; How to distribute air; Trouble-shooting air; Ventilation, Filtration; Sound, Comfort.

Only 25¢ each.

## 4) "PRODUCT KNOWLEDGE, PROTECTIVE MAINTENANCE, TROUBLE-SHOOTING, ADJUSTMENT, REPAIR OF ELECTRIC MOTORS"

A discussion by T. N. Schierloh, service technical manager of General Motors' Delco Products Div., on servicing refrigeration and air conditioning motors.

Only 40¢ each.

Everyone concerned with air conditioning should read the above books and keep them handy for reference purposes. Order your copies now.

## PAMPHLET FORM

- 5) Water Shortage Cited as Aiding Trend to Air-Cooled Residential Air Conditioning
- 6) News Survey Shows Trends In Residential Air Conditioning
- 7) Psychological Study Shows Hidden Benefits of Home Conditioning
- 8) How Ceiling Diffusers Can Be Used In Residential Systems
- 9) '55 Home Unit Sales Up 34% In N. Y. Area
- 10) Chilled Water Central Air Conditioning Installed for \$1,000-\$1,400; Utilizes Wet Heating System, Needs No Duct
- 11) Detroit Air Conditioning Sales at New High
- 12) Survey Shows Equipment In Food Stores
- 13) Survey Points Up Replacement Market for Restaurant Refrigeration Equipment
- 14) New Minneapolis Survey Shows Home Installations 270% Higher Than '54
- 15) Air Conditioning, Commercial Refrigeration Shipments 1949-1953 from Figures Collected by U. S. Bureau of the Census
- 16) Minneapolis Residential Air Conditioning In 1954
- 17) Memphis Residential Air Conditioning, 1954
- (Quantity rates—100 or more copies—available upon request.)
- Single copies, 20¢ each.

## Air Conditioning &amp; Refrigeration News

450 W. Fort St., Detroit, Mich.

Please send me the following reprints (circle corresponding number which precedes listing above):

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Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

Reprints sent post-paid if payment enclosed. 8-20-56

## PATENTS

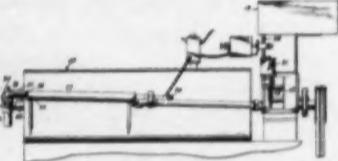
## Week of April 3

2,740,182. METHOD OF MAKING A HEAT EXCHANGER ELEMENT. Edward C. Simmonds, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application May 24, 1952, Serial No. 289,729. 5 Claims. (Cl. 29—157.3.)



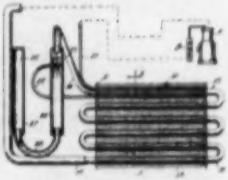
1. The method of producing a sheet metal element having relatively large and small internal passages which comprise superposing a stop-weld material on one side of a sheet of metal with a first portion thereof extending from edge to edge to form a large passage and a second portion extending from said first portion to form a smaller passage, placing a second sheet of metal in superposed relationship to said stop-weld material whereby said stop-weld material is arranged between the sheets, forge welding the two sheets into a single composite sheet of greater length and less thickness, forming said relatively large passage by expanding said sheets adjacent said first portion of stop-weld material by inserting a tool of such dimension that it separates said sheets at said first portion without appreciably stretching the metal, protecting the area thus expanded from further expansion by inserting the composite sheet within a die having portions engaging the outer walls of said large passage and having other portions spaced from said composite said second portion of stop-weld material, and expanding said smaller passage under a fluid pressure which stretches the metal in the walls of the smaller passage.

2,740,262. FLOW ATTACHMENT FOR SOFT CREAM FREEZERS. Otis M. Stalckup, Redondo Beach, Calif. Application Feb. 9, 1953, Serial No. 335,716. 7 Claims. (Cl. 62—3.)



1. A flow attachment for soft mix freezers of the type wherein refrigerated mix is extruded from a cylinder comprising: means for drawing off mix from the discharge end of said cylinder; means for conveying said drawn off mix to the inlet end of said cylinder; means for supplying heat to said drawn off mix during its passage toward said inlet end; means for supplying additional mix to said inlet end including a valve for opening or closing the same; and means responsive to a change in temperature of said drawn off mix for opening or closing said valve; said last mentioned means comprising a thermostatic switch located adjacent said heat supplying means and operative upon an increase in temperature thereof to open said valve.

2,740,263. FEED CONTROL MEANS FOR REFRIGERATING APPARATUS. Richard W. Kritzer, Chicago, Ill. Application April 6, 1953, Serial No. 347,033. 8 Claims. (Cl. 62—3.)



1. In a refrigerating system which includes a compressor and a condenser for the refrigerant and an evaporator including tubing and a suction line between the evaporator and the compressor; apparatus for feeding refrigerant to the evaporator, comprising a capillary tube having a portion thereof in heat exchange relation with the exterior of the inlet portion of the evaporator for varying the flow of refrigerant therethrough responsive to

### CHIEF REFRIGERATION ENGINEER

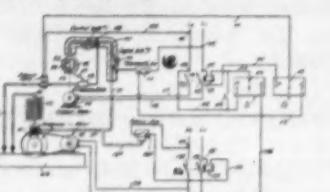
Unusual opportunity for a well grounded man who wants and can take responsibilities.

#### SALARY OPEN

Location New York City—Our organization knows of this ad. Write in confidence to Box 1000, Realservice Advtg. Agency, 110 West 34 St., N.Y.C.

temperature changes in said portion of the evaporator, a columnar receptacle into which the capillary tube discharges the refrigerant as varied by said temperature changes in the evaporator, a conduit for refrigerant from the upper portion of the receptacle to the inlet of the evaporator, and means controlled by variations of temperature of the refrigerant from the evaporator for controlling the rate of flow of refrigerant from the receptacle to the evaporator.

2,740,264. APPARATUS FOR PRODUCING FROZEN CONFECTION. Emery Thompson, Jr., New Rochelle, N. Y., assignor to Emery Thompson Machine & Supply Co., New York, N. Y., a corporation of New York. Application Aug. 31, 1951, Serial No. 244,630. 8 Claims. (Cl. 62—4.)



1. In apparatus for producing frozen confections the combination with a freezer having a motor for operating a dasher thereof; and a refrigerant circulatory system therefor including

heat exchanger means and a compressor having a motor, a solenoid valve and an adjustable expansion valve in series in a high pressure conduit means between said compressor and said freezer with each of said valves adapted to control flow of refrigerant in said system, and a low pressure return conduit means between said freezer and said compressor; of heat-responsive means to adjust said expansion valve located in a field of influence of the temperature of said return conduit means substantially thermally remote from the freezer proper and its heat exchange means; an electrical supply circuit for said freezer and compressor motors; and means to operate said solenoid valve includes thermostat switch means electrically to connect it to said electrical supply circuit, and heat-responsive means to operate said thermostat switch means also located in said temperature field of said return conduit means substantially thermally remote from the freezer proper and its heat exchange means; said pair of heat-responsive means being adapted respectively to open said expansion valve and close said thermostat switch means for simultaneous opening of both of said valves at a predetermined elevated temperature of said return conduit means temperature field as distinguished from said freezer proper.

(To Be Continued)

## CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$7.50 per insertion. Limit 50 words. 15¢ per word over 50.

RATES for all other classifications \$10.00 per insertion. Limit 50 words. 20¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other address by actual word count. Please send payment with order.

## POSITIONS WANTED

APPLICATIONS ENGINEER—air conditioning—plumbing—heating. 16 years experience field and office. Proven capability record heating, plumbing, air conditioning, refrigeration plan specification estimator. Speciality selling experience—know the contracting business—will travel. 7½ years formal education—college—industrial school graduate. Desire position with aggressive air conditioning and mechanical contractor in Texas or California. P. O. BOX 7259, Houston, Texas.

## POSITIONS AVAILABLE

OPPORTUNITY FOR manufacturer's representative: To increase your earnings, sell a full line of freezers, beverage coolers, display cases, dual temperature reachins and walkins. We manufacture a quality line to meet competition. Territories now available, write HOWARD REFRIGERATOR CO., INC., 4745 Worth Street, Philadelphia 24, Pa.

MANUFACTURER'S REPRESENTATIVE to sell special items of commercial refrigeration, which will be fill in items for established dealers. Territory, New York, Pennsylvania, Midwestern or Southwestern states. THE C. SCHMIDT COMPANY, 1712 John Street, Cincinnati 14, Ohio.

SALES ENGINEERS—Two for Cleveland and Cincinnati, Ohio location by major manufacturer of air conditioning equipment 2 to 125 h.p. Will promote product with users and specifying agencies and sell through franchised outlets. Must have some experience in air conditioning field. Degree helpful. Limited travel required. Salary commensurate with age and ability. Expenses, incentive plus usual benefits. BOX A5600, Air Conditioning & Refrigeration News.

FACTORY REPRESENTATIVE: National manufacturer of all types environmental equipment, including low temperature, humidity and altitude chambers, has open territory in the New England states. Write giving all qualifications and other lines handled. BOX A5600, Air Conditioning & Refrigeration News.

TOPFLIGHT AUTOMATIC washer and dryer serviceman. Must be fully experienced on all popular makes. Write, stating experience, age, salary expected, also if you have had experience in any other line of service. Well established firm in southwestern Ohio. Write BOX A5607, Air Conditioning & Refrigeration News.

## EQUIPMENT FOR SALE

BRAND NEW in original cartons 280 Tecumseh sealed refrigeration units, compressor motor ½ h.p., evaporator condenser, model numbers HL-199, HL-201, and HL-204. Will sell entire lot at a bargain price. AMCO MACHINERY CO., 125 Leib Street, Detroit 7, Michigan. Phone LO 7-1070.

ARCTICAIRE AIR conditioning equipment 2, 3 and 5 ton packaged water chillers, air or water cooled. Direct expansion air conditioning systems 2, 3 and 5 ton, air or water cooled, self contained and remote types. Write for literature and prices. ARCCO, MANUFACTURERS AGENTS, INC., Merchandise Mart Bldg., 2201 Grand Avenue, Kansas City, Missouri.

NEW SELF contained Kesco automatic condensate water disposal pumps for air conditioners ice cube bins; at your local wholesaler; available in 10 and 20 foot heads.

NEW YORK, Abco Refrigeration, 1615 Second Ave.

JAMAICA, N. Y., Wholesale Distributors, 148-24 Liberty Ave.

MT. VERNON, Eastern Supply, 521 East Third Street.

SYRACUSE, Gould-Farmer Co., 1020 W. Genesee Street.

WHITE PLAINS, County Seat, 111 Central Ave.

NEWARK, N. J., Tesco Distributors 78 Boston Street

DAYTON, OHIO, W. H. Kiefaber Co., Refrigeration Dept.

LOS ANGELES, CALIF. Air Cold Sales Co., 1337 So. Atlantic Blvd.

SACRAMENTO, CALIF., Associated Refrigeration, 1717 Eye Street

SEATTLE, WASH., Refrigerative Supply, 204 W. Republican

DETROIT 4, MICH., Lee Equipment Co., 4721 Joy Road

HIGHLAND PARK, MICH., J. M. Oberc, Inc., 55 Oakman Blvd.

BRIDGEPORT, Conn., Parsons Bros., Inc., 2127 East Washington Ave.

Distributors write to KESCO PRODUCTS CORP., Springfield Gardens 13, N. Y. for sample pump and literature.

WATER COOLERS: Quality built bottle and pressure type. Full capacity. Lowest cost. Beautiful cabinets, well designed, sturdy. Complete five year guarantee on sealed refrigeration cycle. Proven in service over past twelve years. Write on your letterhead for literature and prices. REMCOR PRODUCTS COMPANY, 321 E. Grand Avenue, Chicago 11, Illinois.

COMPLETE AIR conditioning system, now operating, 2 cooling towers in two units, 125-ton compressors in three units. Write BOX A5606, Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

FOR SALE—Well established and profitable commercial refrigeration and air conditioning business, sales and service. Dealer for best-known exclusive franchises. Doing large volume—potential sales unlimited. Unequalled for right person. Will consider partner. Substantial cash required. Located in large Midwestern city. BOX A5608, Air Conditioning & Refrigeration News.

MISCELLANEOUS

ATTENTION SERVICEMEN: Send for free circulars and bulletins on refrigeration parts and equipment. Real money saving values: WALTER W. STARR: 2833 Lincoln Avenue, Chicago 18, Illinois.

CONTRACT MANUFACTURER will build to your brand name. Twenty-five years experience manufacturing 2 to 15 ton air conditioners, water coolers, liquid chillers, low temperature units, refrigeration specialties and cabinets. Will adhere to schedules. Can design. Present your needs. Write BOX A5609, Air Conditioning & Refrigeration News.

# Government Contracts

## SYNOPSIS OF PROPOSED PROCUREMENT

### NAVY

Navy Purchasing Office, 3rd Ave. & 29th St., Brooklyn 32, N. Y.  
OIL FIRED FORCED WARM AIR FURNACES—various—IFB N140-79-57B—  
Bid Opening 29 Aug. 56.

### AIR FORCE

Purchasing and Contracting Office, Kirtland Air Force Base, Mich.  
The following items are procured under IFB 20-612-57-4—Bid Opening 1 Sept. 56.  
REFRIGERATORS, ELECTRIC, 110V-120V a.c. approximately 10 cu. ft.  
with 1 ft. freezer, 190 ea.

### GENERAL SERVICES ADMINISTRATION

General Services Administration, Business Service Center, Region 3, 7th and D Sts., S.W., Washington 25, D. C.  
The following items procured under IFB R2H-76717-R—Bid Opening 8-29-56.  
AIR CONDITIONING UNITS, in accordance with Federal Specification 00-A-372, and Amendment No. 1, 5 hp., 60,000 B.t.u./hr., 3 each, 10 hp., 120,000 B.t.u./hr., 1 ea.—TOWER COOLING, with pump, 5 ton, 4 ea., 10 ton, 2 ea.

## Gonzales Upped In D-H Water Service Names Sales Reorganization

Ryan, Rosenfeldt

LOS ANGELES—A number of organizational changes in the sales division of Drayer-Hanson have recently been completed. Fred E. Schmuck, national sales manager, has announced.

Andrew Gonzales, formerly a sales engineer, was promoted to assistant to the sales manager. He has been given responsibility for sales order service, order processing, and claims handling, as well as office administration.

A sales engineering training program has been instituted with William Randall, named first-on-the-job trainee.

In a revision of field territory assignments, Sales Application Engineer William Keichline was assigned the areas surrounding Boston; Kansas City; New Orleans; Denver; Little Rock, Ark.; Austin; Houston; Dallas; Wichita; and San Diego, Calif.

Irving Secord, another sales application engineer, will service El Paso, Texas; Phoenix, Ariz.; San Francisco; Portland, Ore.; Missoula, Mont.; Salt Lake City; Omaha, Neb.; Minneapolis; and Miami, Fla. He will also cover Hawaii and the Export Div.

Harvey Lange, most recent addition to the staff, will handle O.E.M. and commercial refrigeration accounts.

Promoted to the post of art director and company photographer is George Runyan.

NEW YORK CITY—Appointment of William J. Ryan and Morris L. Rosenfeldt as vice presidents of Water Service Laboratories, Inc., chemical engineer and specialist in water treatment in commercial and residential buildings, is announced by Henry L. Shuldener, president of the service organization.

Ryan joined Water Service Laboratories in 1933, and was made technical manager in 1944. Rosenfeldt became associated with Water Service Laboratories in 1933.

### Trane Promotes Graham, Appoints Stroupe In N. C.

LA CROSSE, Wis.—The Trane Co. announced recently that William D. Graham, Jr., manager of the Trane Sales office in Greensboro, N. C., for the past four years, has been promoted and transferred to the firm's home offices in La Crosse for specialized assignment.

He will specialize in sales office operation and procedure as part of the general sales staff and seek to augment liaison between field and home office, it was added.

Taking over as manager of the Greensboro office is E. A. Stroupe, Jr., who has been with the North Carolina staff since 1950.



## NEW KRACK LOW TEMPERATURE Electric Defrost Unit Kooler Completely Automatic

- Fewer defrost periods needed.
- Insulated cabinet retains, circulates heat when closed . . . speeds defrosting.
- Internally wired for easy installation.

GET NEW BULLETIN ED-1055 for details and specifications!



901 W. LAKE ST.,  
CHICAGO 7, ILL.

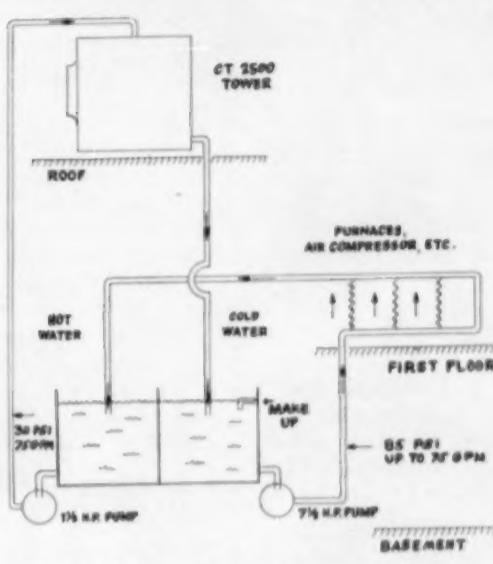
25th Anniversary in Refrigeration and Air Conditioning



WHOLESALE: United Refrigeration Supply. CONTRACTOR: Paletti Refrigeration Service. USER: Liberty Cash Grocery Warehouse, Memphis, Tenn.

For more information about products advertised on this page use Information Center, page 22.

## Sump System, Cooling Tower Use Cuts Metal Firm's Water Bills over 90%



SYSTEM for saving cooling water at plant of Firth-Loach Metals Co., Pittsburgh.

PITTSBURGH—The Firth-Loach Metals Co. near here recently installed a cooling tower that cut down on cooling water bills for their furnaces so startlingly that three checkers were sent out by the local water company to check the company's own water meter readers.

Firth-Loach manufactures cemented carbide tools. This requires sintering in hydrogen or vacuum furnaces at 2,700° F.

For these furnaces and for a variety of other applications, such as the cooling of high frequency induction coils, vacuum pumps, the aftercooler on an air compressor, an X-Ray machine transformer, a high frequency converter, a large amount of water has been required.

### COOLING TOWER IS VITAL LINK IN PREVENTING WASTE

Charles H. Miller, maintenance superintendent of Firth-Loach, determined that a Halstead & Mitchell cooling tower would be a vital link in re-circulating and cooling the water, and prevent its wasting to the sewer.

The Firth-Loach water bill is now  $\frac{1}{2}$  of what it was prior to the installation of the cooling tower, a Halstead & Mitchell CT-2500. Since the company is now using 50% more water, the cost is really  $\frac{1}{2}$  of what it would have cost without the cooling tower.

These are the results which were so startling that checkers were sent out by the water company to check its own meter readers.

The system as devised by

CT-2500 Halstead & Mitchell cooling tower is said to have cut cooling water bills over 90% even though Firth-Loach Metals is now using 50% more water.

Miller, working with Horace L. Schmidt, general manager of sales for Halstead & Mitchell, involves a central sump into which cooling water from all operations is passed.

### SUMP TO TOWER TO SUMP THEN INTO OPERATIONS

From this sump the water is pumped to the cooling tower, and then circulated into the other half of the sump. From there it is distributed back into the operations.

The system maintains 85 p.s.i. at 27 g.p.m. It is capable of later expansion to 75 g.p.m.

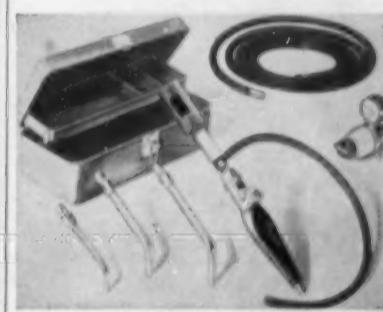
### To Air Condition Bldg.

NEW BRITAIN, Conn.—The Stanley Works has announced that a contract has been awarded to Turner Construction Co. to erect a new plant and air conditioned office building here that is expected to double the company's capacity to produce steel strapping.

## Ace Pump Names 2 Eastern Outlets

MEMPHIS—Roy Bell, Jr., sales manager, Ace Pump Corp. here, announces the appointment of Donovan Associates as exclusive representatives for New England and Thomas Scott of White Plains, N. Y., as representative for metropolitan New York, New Jersey, and eastern Pennsylvania for the Ace line of centrifugal pumps for air conditioning cooling towers and the Ace model 77 portable de-scaling acid pump.

Donovan Associates is composed of W. J. Donovan, West Hartford, Conn., who will handle sales in Connecticut, western Massachusetts, and Vermont, and C. A. Garland of Natick, Mass., who will represent the firm in eastern Massachusetts, Maine, and New Hampshire, it was explained.



all your service and  
repair needs in one kit

**PREST-O-LITE**

Trade-Mark

**REFRIGERATION AND  
AIR-CONDITIONING OUTFIT**

One handy kit provides complete equipment for soldering, heating, brazing, and leak detecting—all you need to repair or service any refrigeration or air-conditioning system.

Three interchangeable open-flame stems assure you of just the right air-acetylene flame for every job. A highly sensitive halide leak detector stem that fits the same torch handle quickly and easily pin-points halide refrigerant gas leaks too small to detect with soapy water.

Standard Leak Detector Stem (right) in this outfit instantly detects as little as 100 parts per million of halide refrigerant gas in air.

Complete outfit,  
as illustrated above  
\$39.75 (list)



Ask for a demonstration at your nearby LINDE Jobber's. Or write today for further information: Linde Air Products Company, a Division of Union Carbide and Carbon Corporation, 30 East 42nd Street, New York 17, N. Y. In Canada: Linde Air Products Company, Division of Union Carbide Canada Limited, Toronto.

### GET IT FROM YOUR LINDE JOBBER

The terms "Prest-O-Lite" and "Linde" are registered trade-marks of Union Carbide and Carbon Corporation.

## Conditioning Cost--

(Concluded from Page 1, Col. 2)  
explained, means the houses are adequately insulated, have proper roof overhang to provide maximum shading, have proper attic ventilation, and are properly oriented on the lot.

The direction in which each house faces and the location of windows in each house was controlled, so far as practical, to have large glass areas face the north or south. Glass areas facing the east or west were required to be properly shaded by roof overhang or solar screening.

### Insulation Minimums

Adequate insulation minimums under the program are 3-in. thick paper enclosed Fiberglas insulation in all outside walls. Six in. of blowing wool for ceilings in colder climates and 3 in. of foil-enclosed insulation for ceilings in warmer regions was required.

In moderate and cold areas concrete slab and crawl space perimeter insulation was specified.

### Initial Cost Offset by Lower Cost Conditioning

Preliminary cost studies indicate that the initial cost of "comfort engineering" is largely or completely offset by the ability to use a smaller and lower-cost heating and cooling unit, Rogers declared.

In the south the builder can pocket savings up to \$56, he said. In the central and northern cities, he may have a total outlay of \$66.

The owner, however, saves more than enough to offset these low initial costs, he added. Operating savings are estimated to average from \$2.62 per month in the north to \$6.02 per month in the south, after deducting for the slight increase in monthly mortgage charges, it was noted.

### 'Almost Anyone Can Afford All-Year Air Conditioning'

"Under these circumstances, almost anyone can afford an all-year air conditioned house if the tests confirm our calculated predictions," Rogers said.

Owens-Corning is making the two-year tests to find the average cost of cooling and heating a "comfort engineered" house in all climates. Some 51 utility companies and 133 builders in 38 cities in all parts of the country are cooperating in the program.

A total of 130 houses have already been completed or are now in the planning stage.

The test resulted from a statement by Robert Thulman, former official of the Housing & Home Finance Agency, to the effect that the average house of 1,000 sq. ft. of floor space should be heated and cooled anywhere in the United States for \$10 a month or \$120 per year.

### Average Area of 1,244 Sq. Ft. In First 40 Test Homes

The average area of heated and air conditioned floor space in the first 40 houses in the program is 1,244 sq. ft.

After adjusting the varying sizes of houses to a standard 1,200 sq. ft. and leveling fuel

## Test Homes' Regional Annual Average Heating, Cooling Cost

Region	Houses	Heating	Cooling	Annual Average Cost*
Northern	16	\$99.11	\$27.58	\$126.69
Central	11	\$75.84	\$49.92	\$125.76
Southern	13	\$29.85	\$109.20	\$139.05
National Average	40	\$70.20	\$60.25	\$130.45

\*After adjustment to the national average for fuel and power rates.

and power rates to the national average, the adjusted national average operating cost is \$10.97 a month, Rogers asserted, less than 10% above Thulman's target.

Floor areas of the actual houses vary from under 900 sq. ft. to more than 1,500 sq. ft.

Of the 130 houses currently in the program, most are ranch style dwellings. A few are two-story and some are split-level.

Most are heated by gas and cooled by electricity. They are followed in order by those heated by oil and cooled by elec-

tricity, completely gas, and completely electric.

Test houses are located as far north as Minneapolis, as far south as Miami, as far east as Boston, and as far west as Los Angeles and Spokane.

The country has been divided into northern, central, and southern regions. Costs are being broken down by region.

### Firm Chartered

OKLAHOMA CITY — Dodson & Cochran Air-Conditioning Co., Inc., Bartlesville, has been granted a 50-year charter.

## Kice Leaves Coleman

### To Work In Family Air Handling Plant

WICHITA, Kan. — Jack W. Kice has resigned as manager of the sales engineering department of the Coleman Co., Inc., to devote more time to the operations of Kice Metal Products Co., a Wichita manufacturer of mill machinery and industrial air handling equipment, it was reported.

The former Coleman engineer will be associated with his father, J. W. Kice and two brothers, Russell W. and James V. Kice.

During his 12 years with the Coleman Co., Kice designed and developed the Coleman "Blend-Air" high velocity air handling system, and also helped establish the company's extensive dealer training program.

## Price Boost--

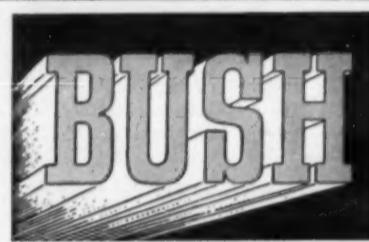
(Concluded from Page 1, Col. 4)  
units will be increased between 5% and 10% within 30 days. He made the announcement at Emerson's annual distributor convention during which the company's 1957 air conditioner line was presented.

Philco revealed that it plans to raise prices of its major appliances, and also TV receivers and radios, up to 10% soon. Both companies said the price hikes were made necessary by the rising cost of materials.

### A. A. Maycock Dies

SALT LAKE CITY — Ambrose A. Maycock, president and owner of A. A. Maycock Co., a heating engineering firm, died here July 27 of a heart attack while on the way to the hospital.

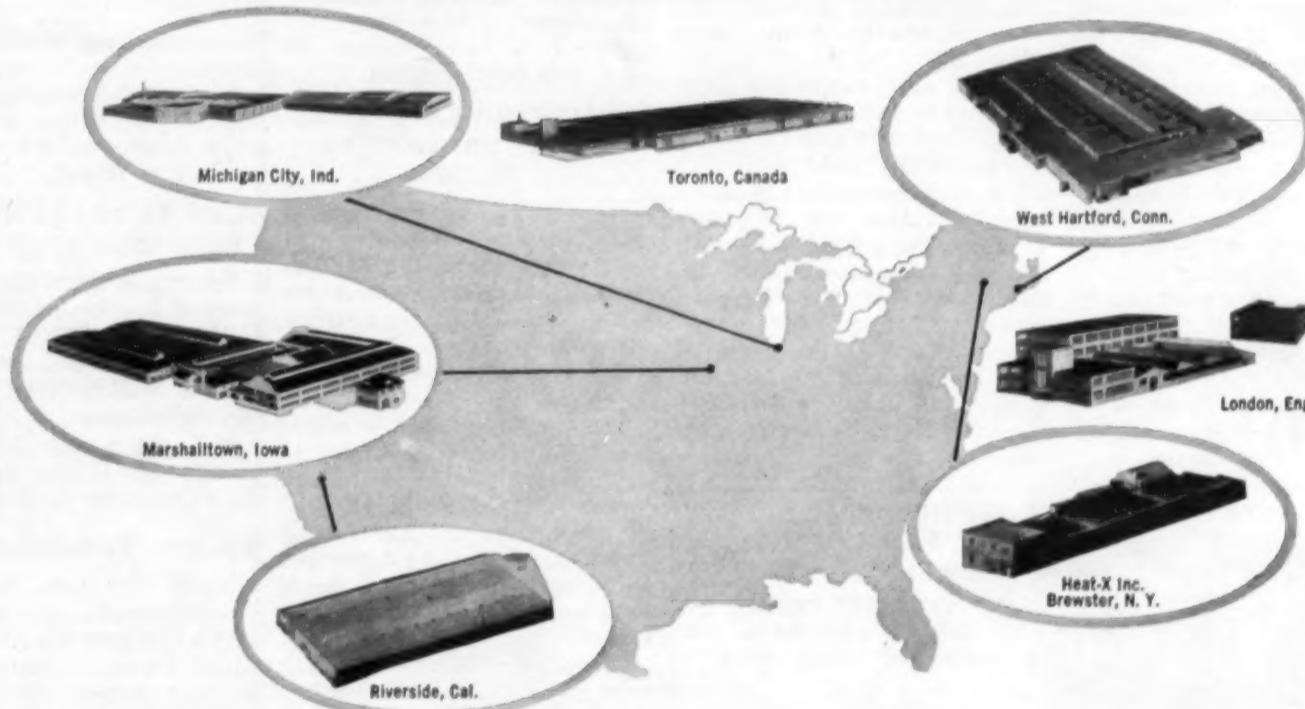
Maycock was 50 years old. He was a past president of the Salt Lake chapter of ASHAE.



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FOR EVEN GREATER GROWTH



Heating, air conditioning and refrigeration products are flowing from the recently formed Dunham-Bush manufacturing facilities.

This "one-source" teaming of Dunham and Bush spells many advantages for architects, engineers, wholesalers and contractors.

A nationwide network of manufacturing plants and strategically located warehouses assures the "close-to-source" supply that permits faster delivery, lower freight costs. A substantially expanded force of sales engineers makes available on-the-spot engineering and application assistance. Greatly augmented resources and facilities permit continued research and development of new products to serve an expanding field.

Dunham-Bush... a single source, single responsibility for heating, air conditioning and refrigeration... teamed to serve an industry's growing needs.

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AIR CONDITIONING, REFRIGERATION, HEATING PRODUCTS AND ACCESSORIES

For more information about products advertised on this page use Information Center, page 22.